

COMPANY
PROFILE

—
2023



DEVELOPMENT
EXPERTS TRADING Co.

شركة خبراء التنمية للتجارة

DEVELOPMENT EXPETRS TRADING. CO.



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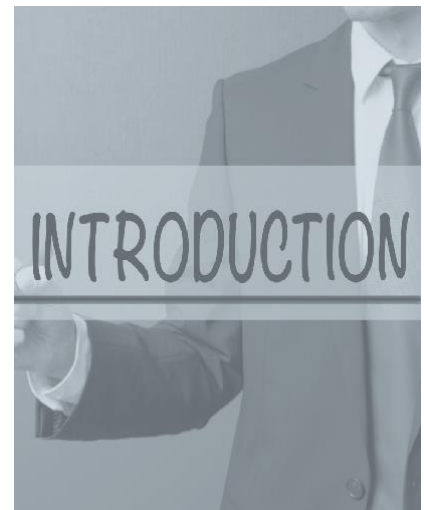
DEVELOPMENT EXPERTS TRADING Co.
IS THE LEADING TRADING COMPANY IN
THE KINGDOM OF SAUDI ARABIA



We are the innovation global corporate

The unique geographic location of the Kingdom of Saudi Arabia made it important for global trade and investment strategic center, help to attract investors and increase economic activity in the country in various fields. The contracting sector is one of the most important economic bases for most countries of the world. Saudi Arabia construction sector contributes directly to drive the growth of the country to move economic activity in many industries and activities associated with it. Also generate a lot of job opportunities according to a report issued by the Council of Saudi Chambers, indicates that the recovery of the construction sector ensures the growth of activity in the development sectors and industries. It means, that the construction sector is the engine of growth in the national economy.

The contracting sector in the Kingdom of Saudi Arabia is witnessing rapid growth and increasing in the demand for specialized companies qualified to execute a number of large projects



Such works require high professionalism and efficiency in performance. We are distinguished as DEVELOPMENT EXPERTS TRADING Co. It's our commitment to quality and attention to detail at all levels that enabled us to achieve consistently advanced results.

Our Company

DEVELOPMENT EXPERTS TRADING Co. was established according to unique standards and deep experience inspired by its vision of construction. Our services are of the highest quality and workmanship

ABOUT US

Therefore, we ensured continuous development to upgrade our system, policies, and strategic plans, which we contribute actively to enrich our society and earn the trust of our Clients, through the consolidation principles: credibility, professionalism, and commitment.

DEVELOPMENT EXPERTS TRADING Co. Is one of the leading companies in KSA, specializing in the field of Trading & manufacturing and has gained vast experience, and has made its name in the Trading & manufacturing field.

COMPANY HISTORY

DEVELOPMENT EXPERTS TRADING Co. Owns a great team of experts in the field of management to meet the growing demand for advisory services and the urban market by integrating global thought with local expertise. DEVELOPMENT EXPERTS TRADING Co. Highly experienced team, who have developed constantly to serve clients of DEVELOPMENT EXPERTS TRADING Co. to meet their needs and have achieved considerable distinction in specific field sectors with the correct concept. By building various respective projects, qualifying to be the leading Trading Company in the field at the level of the Kingdom. DEVELOPMENT EXPERTS TRADING Co. Trading is represented by management and engineering staff to understand the rules and established market thoroughly practical, academic fields, and accumulated field experience.

Construction and infrastructure projects were and remain among the most important priorities of DEVELOPMENT EXPERTS TRADING Co. Diverse activities, backed by willingness and ability to meet market needs and customer expectations in terms of quality and standards.

DEVELOPMENT EXPERTS TRADING Co.'s Work sector mission was the beginning of an important urban recovery that contributed to pushing the economic wheel to the Kingdom and the establishment of a new urban era as well as a modern perspective.

DEVELOPMENT EXPERTS TRADING Co. Works on huge and medium size respective project development projects in the Middle East and Saudi market, it is a specialized facility providing integrated urban services with professionalism and commitment to international quality standards.



**Professional
Staff**



**Timeline
Management**



**Technology
Innovation**



**Our value
is to create
professional
work & talent.**

CEO Message

The beginning was just a dream, then it comes true

The beginning was just a dream, then it comes true...

thanks to Allah The Almighty always and to the efforts of the loyal employees of DEVELOPMENT EXPERTS TRADING Co.

We have crossed the odds and achieved successes after success until we reached the forefront of the elite of companies in the kingdom, we did not spare any effort to keep our position in the forefront. The kingdom has accompanied economic development through modern and sophisticated methods that have helped to attract investors and increase the economic activity in the country, so we have been eager to continuously develop to raise the efficiency of the company with the policies and strategic plans we aspire.

Since we started in DEVELOPMENT EXPERTS TRADING Co. to practice our business and reputation grows among our customers as one of the most prominent companies in the kingdom. The quality of performance on all levels and the satisfaction that we feel from our clients are the basis of our success and proud to stand behind them. Our team works in one spirit, each one of them has a strong sense of responsibility and the power to offer the best efforts they can.



Today in Development Experts Trading Co, we have established our principles based on making the concept of quality a sole option for ranging from work in projects requiring all our related works and complex metal and concrete to prestigious construction projects such as Air Base Infrastructures, University buildings, Technical Colleges Buildings, Various Ministry Buildings, and Sports facilities that it is characterized by high quality. In addition, the specialized infrastructure works to provide the best services to our customers, who believe in our power and our capabilities in fulfilling our obligations under all circumstances, as they trust that the result they receive will be above their level of expectations.



We always try to give more value & innovation to the business needed with creative & efficient solution more than you can think.

Corporate History



Current Employee

108 employee



Project Done

more than 100 project



Corporate Office

The main branch



Our Experience

Development Experts Trading Co. has an extensive experience and reputation from being a company that can complete construction projects of a delicate and complex nature, including electrical and mechanical works. DEVELOPMENT EXPERTS TRADING Co. is one of the leading Saudi companies specializing in the work of Trading in various disciplines, we started strongly in 1960, based on a strong experience and creative intellectual and powerful human energies. We have achieved an impressive successes and we are still achieving which created our competitive position in the market as one of the main pillars in the Trading sector in the kingdom.



Our Experience is Your Advantage.

Our Mission

working on the execution

- Our company is working on the execution of all projects with the highest international standards, providing the best services and marketing distinctive development ideas in all economic sectors and transforming them into projects with developmental dimensions.



- We focus on what we achieved by leveraging our sources, and through our comprehensive understanding of market requirements and working together with the client, so we are able to provide comprehensive solutions in our field.

Work to stimulate the sustained growth of our business.

To effectively contribute to the fulfilment of the needs and aspirations of our society by providing the best services and urban products in accordance with a unique innovative concept of a professional team of professionals.

- Employing the accumulated experience of the company since its inception, its market value and client's constant trust.



-The execution of high-level projects and the provision of integrated designs, engineering solutions in the field of engineering, civil contracting, infrastructure for water, mechanical, electrical and sanitary works by focusing on three values: human resources, innovation, and passion for work, while considering applications related to environmental protection and sustainable development of societies.

DEVELOPMENT EXPERTS TRADING Co. seeks to create and adopt advanced ideas and products that keep pace with the expectations of clients and allies to achieve the optimum return by focusing on a structure that always works on innovation and continuous development.

Our Services

At DEVELOPMENT EXPERTS TRADING Co. we enjoy the extensive experience we have gained through the execution of many projects in the areas of: infrastructure for all our projects, educational institution buildings, residential and commercial buildings, electromechanical works, water and sewage networks, water treatment plants, military projects, gardens and improvement of cities.

we enjoy the extensive experience

We have expanded our field of work to include the execution of the highest quality our projects, where the stages of work begin with a feasibility study for the project and the initial design development, followed by the detailed design and construction process and construction work and then the phase ends with the construction work after that of maintenance and operating, including government buildings, commercial buildings, industrial buildings, educational institutions.

Our Aspirations

The continued pursuit of excellence, which the company has always sought to transform into a reality that enables it to provide the best engineering and Trading services to its Clients, which opened up new horizons to work in a spirit of excellence and forecast the expected financial estimates in the next years.

We always strive to keep up with the latest technologies and modernity in the world of contracting.



Our Vision

To be a unique

-To be a unique company at the level of the kingdom, with multiple investments, also to be able to lead and participate in the development of projects and companies with a studied scientific methodology, and strategic investments in major companies.

-To invest our experience and values of growth at all levels in order to become pioneers in the global market and provide engineering excellence to customers and achieve the highest level of value by adhering to best practices in terms of governance and transparency.

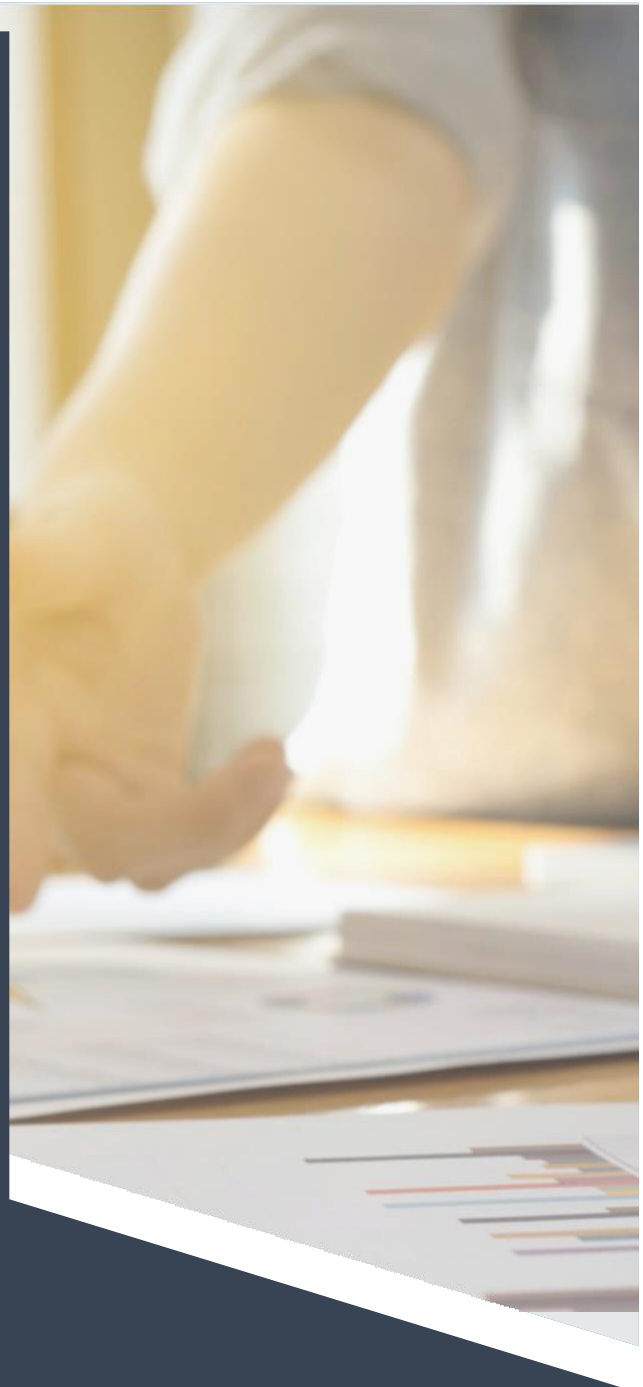
-We strive to establish our position as a leading company and partner in the construction, and development of projects, business excellence and sustainable.

-We strive to be the leading company specialized in the Trading & contracting business, which has a pioneering position in the markets to provide innovative solutions for various projects.

- To be one of the leading companies by providing integrated Trading services of the highest quality and profession with the full commitment to innovate and develop the finest urban products according to the latest international standards.

To be the first and most distinctive choice and contributor to the construction industry
To be one of the companies that meet clients' needs through expertise and extensive knowledge in the scope of construction and fully aware of the construction industry's techniques.

Leaders in the development and delivery of urban services with the best and highest levels of international and creativity excellence.



Our values and principles

We strive in a sustainable way



- We strive in a sustainable way to implement the innovative concept in the construction works and infrastructure to provide everything that is creative according to the latest science and engineering theories. With our full commitment in the embodiment the effective partnership to achieve success and full satisfac-



- Transparency, trust and credibility with Clients, subcontractors, and allies in engineering projects in the region.




- Client satisfaction is our first concern and priorities. High professional quality, credibility and honesty, transparency and clarity, Innovation and creativity, fast performance and execution, and developing the skills of the Engineering, Technical and Administrative staff of the company.



- We work on creating a unique value every day, and we pledge to be better each year than before





What Distinguishes Us (Why DEVELOPMENT EXPERTS TRADING Co.)

1 62 Years of experience

Since 1960, we have started by a constant struggle and a hectic race to achieve advanced positions in the field of Trading, we have gone through all the stages, we have passed the odds, and we have made it to become a part of our daily life that is indispensable.

3 Development and Training

Investing is the most successful investment ever, as well as our principle of selectivity in selecting competencies is based on personal skills such as positive, striving for continuous training and embracing core values such as cooperation and credibility, we build efficiency of our team, the career development was one of their rights, as we were keen to hone their skills and continue to provide a healthy working environment and adopt a policy of motivation, all to ensure their comfort thus to get the maximum productivity and quality as this is what we gain.

2 Pioneers in contracting and con-

It is not easy to take the lead in a large and challenging sector such as the trading sector and will not pass the intense competition except by excellence. Long experience and high quality with the use of the latest technologies and mechanisms guaranteed for us an advanced leadership position. Our ability to execute projects, no matter how large and high quality, has strengthened our position as one of the important and essential pillars of the constructing sector in the Kingdom.

4 Innovative and effective solutions

Our research and development team is taking care of this task, the traditional solutions are no longer satisfying our ambitions. Technical and technological methods are in spectacular twist which inspire us to offer solutions and services which satisfy our passion, and therefore, expect to hear what the unexpected, and see what you don't imagine, but you will be definitely happy with it.

Our style

At DEVELOPMENT EXPERTS TRADING Co., we are eager on the effective manner of: human resources, material, financial, informational, ideas and time to develop strategies, objectives, policies, procedures, and general rules to execute any project and coordinate all its resources to achieve the desired goal.

CLIENT STATEMENT

Keeping up with modern technology in all of our activities:

The technology is a practical and effective weapon in all journals, our research and development team informs us about the latest technologies and solutions, and they decide the best methods and how to use them and optimize them to achieve the best results for us and our clients.

Commitment to our responsibility towards our community:

Our sense of responsibility towards our society stems from the fact that we are an integral part of this society, our sense of being a part of its members, we participate in its construction and proud to play our role in it with competence and love that extends its effects to the whole society categories.

Integrity:

DEVELOPMENT EXPERTS TRADING Co. is committed to promoting and implementing the highest standards of ethical conduct. We ask all our employees, suppliers and business partners to work in accordance with our ethical principles. All forms of bribery, corruption, immoral behavior and activities cannot be tolerated.

Our human cadres

From the beginning we realized that our employees are our most precious, and through their dedication and keenness to achieve the principle of high quality in the finest details, they have been the credit of where we are right now, leading the rapidly growing Saudi market.

Our selection policy is based on employing qualified technicians from all over the world, and in addition to the highly qualified management team, the technical department consists of engineers who have a solid experience in engineering and construction matters and who seek to support specialized groups of technicians in different fields according to the specific requirements of each project are also our source of pride and glory.





Our quality

The quality factor is confirmed at DEVELOPMENT EXPERTS TRADING Co. Trading Company, as every employee at DEVELOPMENT EXPERTS TRADING Co. is eager to stick to the highest quality in each of the company's various activities. The company has executed number of massive projects using the latest international technologies and the highest specifications and requirements in terms of quality, relying on a complete and highly qualified team dedicated to follow the application of quality standards. The company implements the comprehensive quality system in its implementation of all business.

**We never stop do
innovation & Experience.**

Chairman Message



It is with pleasure that I am welcoming you to the official Profile of Development Experts Trading & Contracting Co.

Thank you for your interest in Development Experts Trading & Contracting Co. and we encourage you to explore our website, from the list of our projects of achievements and to have an insight into

our exceptional performance in the realms of the construction industry. From a small start 60 years ago- in 1960, with the blessings of the most merciful God, and the encouragement which was given by Saudi officials & our precious Clients, the company assets and resources grown to undertake an active role among reputable construction company in the Middle East. Our successful past is a significant land mark of our professionalism & excellent management capabilities.

As a Qualified, competent, innovative, veteran in the construction field with commitment and dedication to the Clients, make our contracts cost competitive. The ever changing market demands were met with our combined strength in sound technical team management and efficient resource allocations for each project. At the heart of our company is a strong commitment to provide our Clients an optimum world class service distinguished by technical project management expertise.

As always we look forward to hearing your feedback on “how we can be of service to you and your company” as we seek to fulfill our mission, which is to provide Quality Construction and Building Contracting Solutions while maintaining high standards of Quality, Safety, Environment and Value Engineering for the benefit our Clients, Nation and Society through professionalism, ethics & quality.

I reassure and express my gratitude to all my clients and well-wishers that we have been playing our part sincerely in the development of the company as well as in the larger interests towards the economic progress of the kingdom.

Thanks to our precious Clients & loyal team of workers and professionals. We have succeeded in proving that we can deliver on our promises, which we can rise to the challenge and excel in our performance to the satisfaction of our clients.

I would like to take this opportunity to pledge that I and the DET team will endeavor to devote our full efforts to exceed our Client’s expectations & fully satisfy their needs and requirements. Also to thank you for being an undeniable cause in our growth and success and we look forward to continually serve your needs.

At our web site, we welcome your comments and we’d be pleased to respond to your requests for more information about us and how we can help you succeed.

Matsumoto Trading Co. constantly strives to meet any and all challenges, adapting to changes in consumer demographics and preferences so that we may provide value to our clients over the next hundred years and beyond. Since our foundation, we have continued to change our business form and model in line with market requirements. “Change” is the core value of our company.

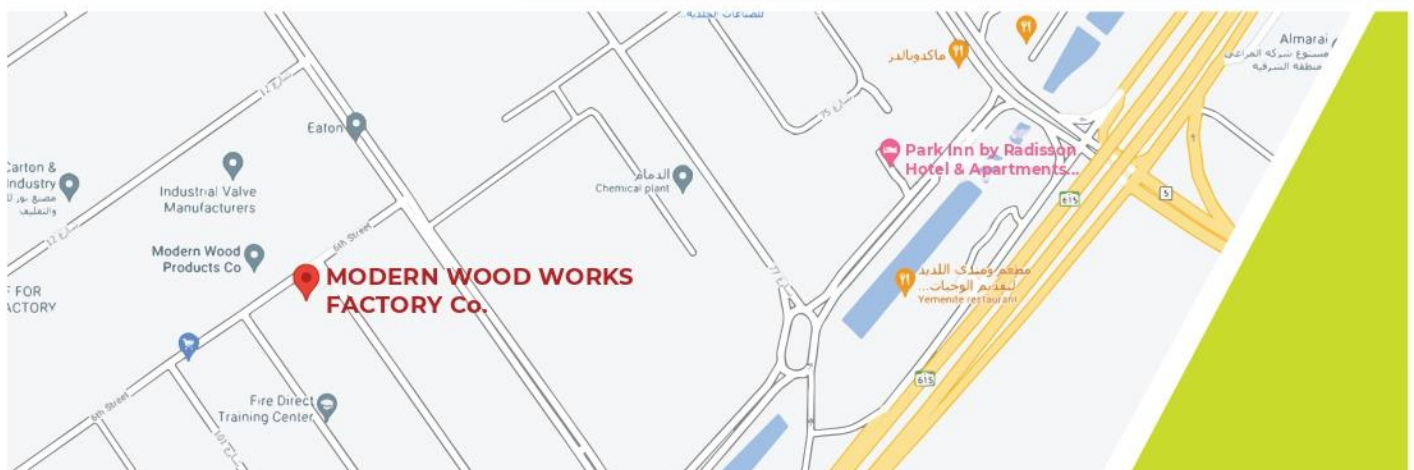
We are now aiming to create further value as a specialized trading company. To accomplish this, we are changing our products and raw materials, together with the services and information we provide to our clients. In addition, through our network of overseas branches and affiliated companies, we will assist in business development over a wider area, particularly in countries with a high demand for cosmetics.

Via these activities, we will continue to serve as a partner that meets the needs of our clients while adapting to changes in the business environment. Through the services that we provide to our clients, we will support the development of the industry under the spirit that ethics and profits are one and the same.

President & CEO
Shunsuke Matsumoto

COMPANY ADDRESS

Name of Company :	MODERN WOODWORKS FACTORY
Established :	1960 (1380)
C. R. No. :	2050047860
Plant :	2nd Industrial City, Dammam
Head Office :	P.O. Box 879 AL-KHOBAR 31952 SAUDI ARABIA TEL. # 013 812 3551 / 013 812 3552
E-mail :	info@mww.com.sa
Website :	http://www.mww.com.sa
Coordinates :	26.232027785264314, 49.97959243924839



QUALITY MANAGEMENT SYSTEM

QUALITY POLICY

The Management of Modern Wood Works Factory is committed to comply with the requirements of the above standards as applicable to its scope of operations with the following corporate objectives, which shall be realized by setting and achieving process related objectives at various functions and levels.

- To provide quality products and services that meet customers' needs and expectations by complying with the requirements of Specifications and Standards as contractually agreed as well as any relevant Statutory and Regulatory requirements as applicable.
- To continually improve its performance in Quality Management System by conducting periodic reviews and assessment of the Management System, Policies and Objectives for continuing suitability and effectiveness.

This policy shall be communicated to all employees and persons/organizations working for or on behalf of Modern Wood Works Factory through Induction, Awareness Training and notices as appropriate. All above mentioned personnel are required to understand and implement this policy within the area of their responsibilities.

This policy shall be made available to any interested party upon request.



INTERNATIONAL EXHIBITIONS

Modern Woodworks has WITHIN AND OUT OF KINGDOM participated in various international Exhibitions within and out of Saudi Arabia. The details is given below:

ARABIAN GULF JOINT DELEGATIONS, CHICAGO

We attended the Arabian Gulf Joint Delegations. Chicago in 1995 and again in 1996. Through this we got an opportunity to expand our business in local and foreign market

NATIONAL HARDWARE

During 12-16 August 1995, a National Hardware Show was organized by U.S. & Foreign Commercial Service. We were invited there and got an opportunity to learn a lot, and now have established a branch in USA in the name of Vital Link In Delaware. Any import or export is being regulated in USA through this branch.

INTERNATIONAL IDEAL HOME EXHIBITION

We have participated in International Ideal Home Exhibition held during 08-14 May 1996 in Dhahran International Exhibition in Kingdom of Saudi Arabia.

SAUDI BUILD '98

We also successfully participated in the 10th International Building Construction Technology and Building Material Show held in Riyadh Exhibition Center during 4-8 October, 1998

A regular participation in different exhibitions is included in our future plans.



KNOWLEDGE PAGES



What is an LED?

An LED is the acronym for Light Emitting Diode. Unlike a regular incandescent light bulb, there is no filament that produces the light.

Almost all of the electricity is used for making light, which makes the LED more efficient.

On the other hand, think of an incandescent light as a heater that happens to emit light as well.

Incandescent and fluorescents emit light with very high beam angles.

Since LEDs are small and powerful with a definite beam angle, it is important when using them to have them arranged in a way that the emitted light is even upon the surface you desire to light.



Benefits of LED Lighting

LED light can save you money not only because they are roughly 80% more energy efficient than other bulbs, they also produce far less heat than metal halides, CFLs, and incandescent light bulbs. Upgrading to LED lighting means you won't spend your summer months cooling down rooms that your light bulbs are busy heating up. While originally a cooler blue tone than incandescent bulbs, LEDs now come in daylight and warm white color temperatures so you can more easily replace your existing bulbs without altering the color of your room.

LED lighting also offers a superior color rendering index (CRI), so you can see the colors of your artwork or makeup more accurately.

LED lighting also offers a superior color rendering index (CRI), so you can see the colors of your artwork or makeup more accurately.

LED replacement bulbs are durable and ecologically friendly.

Staying bright for up to 11 years of continuous operation.

This means less time climbing ladders trying to replace those hard to reach bulbs in vaulted ceilings.

LEDs are one of today's most promising technologies.

- No mercury, making them a cleaner alternative to fluorescent and CFL lamps.
- The lowest energy consumption of any lighting product to date.
- Light quality equal or superior to traditional lighting products.
- Life that is 20 times than some traditional lighting products.



LEDs or Fluorescents - Which is More Efficient?

LED light bulbs for the win! When it comes to purchasing energy-efficient lighting, LEDs surpass CFLs by a wide margin.

LEDs are instant-start with no warm up time needed. They work well in cold weather, and are substantially more durable since manufactured out of plastic instead of glass.

From standard bulbs to fluorescent tubes, LEDs can replicate the same lighting conditions found in fluorescents while lasting longer and using less energy. As an added bonus, all LEDs are RoHS compliant and do not use mercury, a claim that can't be made by fluorescent bulbs.



Things to Consider When Buying LED Lighting

- Equivalent Wattage - While lumens are the new standard, it helps to have an easily recognizable guide.

Comparing an LED bulb to an incandescent will give you a rough estimate of just how well it will light a room. As a very ballpark figure for LED wattages, 1/4 or 1/5 the incandescent wattage value is usually close to what you need.

- Lumens - Lumens directly measure just how much light the bulb gives out in total.

On average, a 60-watt incandescent shines at 800 lumens, with roughly 50-100 lumens of difference above or below.

The variance depends on manufacturer and age of the lamp.

LEDs are directly rated for their max lumen rating and last much longer without dimming of the bulb.

- Color Temperature - Your guide to how the light itself will look. Lower values are warmer, with 2700-3000K being a more incandescent "warm white" while higher temperatures like 5000K will deliver a very harsh "stark white" light.
- Driver Content - Because of their design, LEDs do not typically run on AC voltage.

Many LEDs require some form of driver to convert the voltage from AC to DC for proper operation.

The majority of socket-based LED lamps are self-driven, but you should always check before buying to make sure that you buy both an LED and a driver at the same time if it isn't self-driven.



Benefits of LED Lighting

Measured in degrees Kelvin, color temperature is not the ambient hot/cold temperature of our surroundings.

In fact, the Kelvin scale goes backwards: The higher the color temperature, the cooler light gets, and the lower the color temperature, the warmer light gets.

Warm color temperatures range from 2000K-3500K. This temperature is most often used to decorate homes due to its warm earthiness.

People also tend to look better under this light. Cool color temperatures of 3500-4100K are brighter, offering a "cleaner" look.

When used in homes, this tone tends to work well with cooler color schemes such as blues and whites.

Full spectrum color temperatures are between 5000K-6500K. This light is very bright and pronounced.

Typically perceived as harsh, full spectrum color temperatures are rarely used in homes.

2700K Color Temperature

Due to its soft warm tones, this color temperature is often used in bedrooms and living rooms to create a cozy atmosphere.

3500K Color Temperature

Slightly cooler than 2700K, this light can also be used in bedrooms, living rooms and spaces where more earthy tones such as reds, oranges and yellows are being used.

4100K Color Temperature

This cooler color temperature is more neutral and works well for task lighting in kitchens, bathrooms and rooms using colors like white, blue and green.

5000K Color Temperature

Meant to simulate the color temperature of a bright sunny day, full spectrum light is a bright white light that appears almost blue in color.

It is often used in office spaces to increase productivity.

6000K Color Temperature

Full spectrum light is often described as being harsh on the eyes, so it is not often used residentially, but when it is, it usually appears in garages or home offices, possibly due to studies that have shown that bright white light may increase productivity.



" Color Temperatures are Rarely Used in Homes "

2400K 2700K 3000K 4200K 6200K



What does CRI mean and why is CRI important in LED lighting?

Can't tell the difference between the black and navy colored socks in your walk in closet?

Could be that your current lighting source has a very low CRI! Not all light is made equal; some light renders color better than others.

Color Rendering Index (CRI) is the measurement of how colors look under a light source when compared with sunlight.

The index is measured from 0-100, with a perfect 100 indicating that colors under the light source appear the same as they would under natural sunlight.

This rating is also a measurement in the lighting industry to help discern naturalness, hue discrimination, vividness, preference, color naming accuracy, and color harmony.

- Lights with a CRI that is measured greater than 80 are considered to be more than acceptable for most applications.

- Lights with a CRI that is measured greater than 90 is generally considered "High CRI" lights.

While all of our strips have 80+ CRI ratings, These lights have important applications especially for photography, retail display and grocery lighting, where accurate color presentation is key.

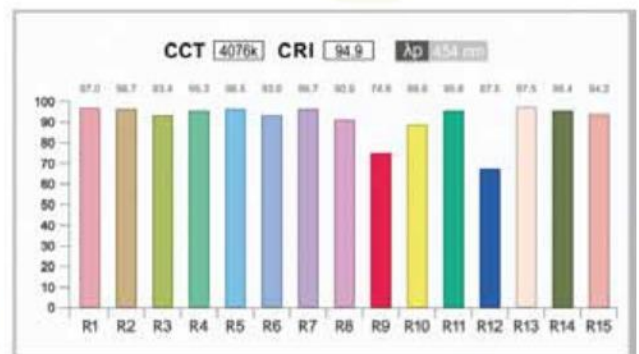
High CRI lighting is equally valuable in home use, as it can transform a room by highlighting design details and creating a comfortable, natural overall feel.

Testing for CRI requires special machinery designed specifically for this purpose.

During this test, the light spectrum of a lamp is analyzed onto eight different colors (or "R values"),

termed R1 through R8 There are 15 measurements which can be seen below, but the CRI measurement only uses the first 8.

The lamp receives a score from 0-100 for each color, based on how natural the color is rendered in comparison with how the color looks under a "perfect" or "reference" light source at the same color temperature as that lamp.



Example of our Natural White High CRI LED Strip Light Test Data

High CRI LED lighting offers the best of all worlds, using a fraction of the energy used in traditional lighting, while rendering beautiful, vibrant tones across the full color spectrum.

With so many benefits, it's easy to see why you should take notice of CRI when making your next lighting decision.

Lighting manufacturers have begun listing CRI ratings on their products, and government initiatives are providing financial incentives for the installation of efficient high CRI lighting.

Though CRI is not the stand alone method for measuring lighting quality.



An Example to Understand CRI



How do we define the lifespan of the LED light?

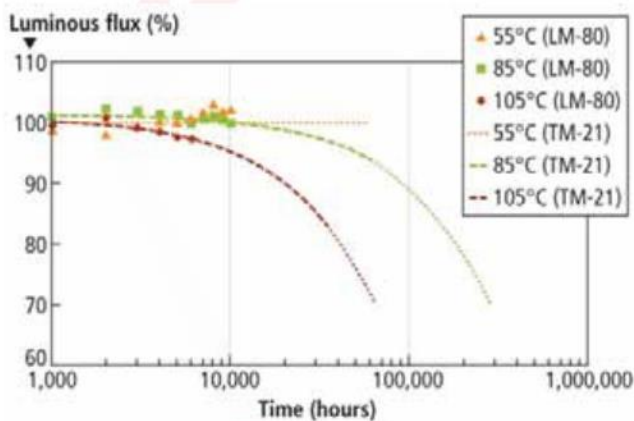
Our LED lights have a range up to 50,000 hours of useful life.

LEDs begin to lose their brightness the moment they are turned on.

The lifespan is defined as a number of hours it takes for the LEDs to achieve 70% of their original brightness (lumen output).

Three similar LED chips are tested over 6,000 hours, each at a different ambient temperature.

The lumens are recorded at intervals and data extrapolated after 6,000 hours to give a theoretical number of hours until the LED reaches 70% brightness.



What is a chromaticity shift?

This is the change in the emitted color of light over the lifetime of the LED light.

Poor quality LEDs can start out as a beautiful pure colored white and change to a blue or pink hue after a short time. We test our lights to ensure that any change in color is not noticeable to the human eye.



LED Energy Savings Calculator. Compare LED electricity savings to CFL or Incandescent lights.

How much can you save? Can LED lights save you money? LEDs are the most efficient light source on the planet.

Due to government energy initiatives, LED lights are projected to be the dominant lighting application in the world in the next 15 years.

Our flexible LED lights are:

- Extremely efficient
- Emit very low heat
- Require little maintenance
- Contain no harmful by-products

The LEDs on PAN LIGHTING have a life rating up to 50,000hrs.

This means that with optimal conditions our LEDs will last over 40x longer than a 1,500 hour light bulb. This also means that it would take 40 light bulbs to last as long as one of our LEDs not to mention having to go to the store to buy the other bulb then have to replace it.

The light savings with LEDs is incredible! Do some trees a favor and buy one!

Please see below to compare the costs and money savings with LED lights vs. incandescent and CFLs.

ENERGY SAVING FOR LED LIGHTS VS INCANDESCENT VS CFL

	INCANDESCENT	CFL	LED
Life Span (In Hours)	1500	10000	50000
Cost	2 SR	8 SR	20 SR
WATTAGE	60 W	14 W	6 W
PRICE OF ELECTRICITY/HOUR (KWH / ١٦ هجئة)	0.01 SR	0.002 SR	0.001 SR
Electricity Cost Used Over 50K Hours	500 SR	100 SR	48 SR
Bulbs Needed For 50K Hours Of Usage	40	5	1
TOTAL 50000 Hour Lighting COST	580 SR	140 SR	68 SR



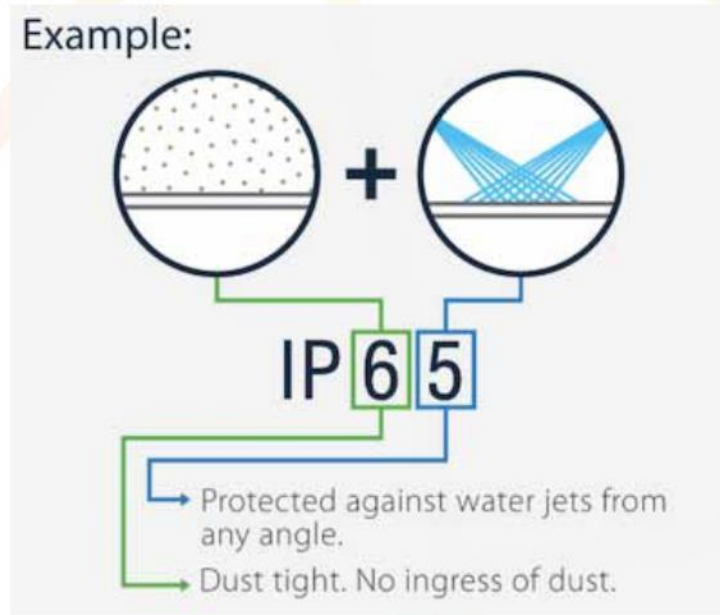
What does IP stand for?

IP is an acronym "Ingress Protection".

It is a measurement of the protection an item will have against solid objects (dust, sand, dirt, etc.) and liquids.

An IP rating is comprised of 2 numbers.

The first number refers to the protection against solid objects (dust, etc) and the second number refers to protection against liquids.



What is an IP Rating?

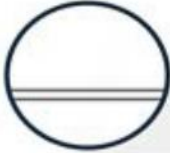





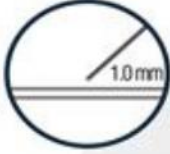







Each IP rating has two numbers, both of which give you information about the protection level. A higher number means greater protection against solids and liquids.

- The first number (0-6) refers to the level of protection against solid objects and moving parts, such as dust, debris, or other solid matter.
- The second number (0-8) references the level of liquid and moisture protection.

Take a look at the chart below to better understand the protection offered with each number.

IP Rating Chart

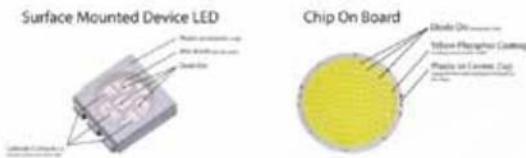
IP ratings are represented by combining the first and second digits of the following columns. See example below.

1st Digit - SOLID Degree of protection against solid objects	2nd Digit - LIQUID Degree of protection against water
 No Protection 0	 No Protection 0
 Protected against a solid object greater than 50mm, such as a hand. 1	 Protected against water drops. 1
 Protected against a solid object greater than 12.5mm, such as a finger. 2	 Protected against water drops at a 15 degree angle. 2
 Protected against a solid object greater than 2.5mm, such as a wire. 3	 Protected against water spray at 60 degree angle. 3
 Protected against a solid object greater than 1.0mm, such as a thin strap. 4	 Protected against water splashing from any angle. 4
 Dust Protected. Prevents ingress of dust sufficient to cause harm. 5	 Protected against water jets from any angle. 5
 Dust tight. No ingress of dust. 6	 Protected against powerful water jets and heavy seas. 6
Example:  +  IP 65 Protected against water jets from any angle. Dust tight. No ingress of dust.	 Protected against the effects of temporary submersion in water. (30 minutes at 3 feet) 7
	 Protected against the effects of permanent submersion in water. (Up to 13 feet) 8



What is COB led? What is an SMD led?

Difference between LED Light: COB and SMD



LED lights are constantly improved to bring about better use, greater versatility and more efficient use of power.

The different models of LED lights are highly popular compared to traditional incandescent lights, mainly because they can last for about 25 times longer with less energy use.

LED lights come in a variety of models.

Start comparing COB vs SMD LED Lights, or before you look at the difference between LED light COB and SMD.

You can choose between SMD vs COB types, for example, depending on your needs for energy efficiency and versatility.

The COB vs SMD LED Lights differ in terms of their features and semiconductors.

SMD vs COB: What is SMD?

SMD, or "Surface Mounted Device" LEDs, are the most common LEDs in the market.

The LED chip is permanently fused to a printed circuit board, and it's highly popular due to its versatility.

You can find it in light bulbs and string lights, and even in the notification light on your mobile phone.

The SMD LED chips come in a variety of sizes.

SMD LED can accommodate chips with complicated designs, like the SMD 5050, which is 5mm wide.

The SMD 3528, on the other hand, are 3.5mm wide.

The SMD chips are small, almost close to the design of the flat, square computer chip.

One of the distinct features of SMD LED chips is the number of contacts and diodes they have.

SMD LED chips can have more than just two contacts (which makes it different from the classic DIP LED).

There can be up to 3 diodes on a single chip, with each diode having an individual circuit.

Each circuit would have one cathode and one anode, leading to 2, 4 or 6 contacts in a chip.

This configuration is the reason why SMD chips are more versatile (comparing SMD vs COB).

The chip can include a red, green, and blue diode.

With these three diodes, you can already create virtually any colour simply by adjusting the output level.

SMD chips are also known to be bright. They can produce 50 to 100 lumens per watt.



SMD vs COB: What is COB?

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COB chips typically have 9 or more diodes. COB chips also only have 1 circuit and 2 contacts, regardless of the number of the diodes.

This simple circuit design is the reason for the panel-like appearance of COB LED light (SMD light, on the other hand, appears like a collection of smaller lights).

But unlike SMD, COB LED lights can't be used to create colour changing bulbs or lights.

This is because there are only 2 contacts and 1 circuit. Multiple channels for adjustment are required to create the colour changing effect.

Because of this, COB LED lights are efficient in single-color applications, but not in more versatile technology.

Another aspect of the COB vs SMD LED Lights difference is in the use of energy.

COB is known for better lumen-per-watt ratios and heat efficiency.

This has a lot to do with the design of COB LEDs, and the cooling ceramic substrate of the chips.

Before, heavy duty technology like spot lights and flood lights made with LED were non-standard, because you'd need multiple LED sources to produce that kind of high lumen output.




But now, COB chips can produce a large amount of lumens with less energy.




You can find it in all kinds of bulbs and applications, such as the flash of your mobile phone or point-and-shoot camera.

Its range is higher with a minimum of 80 lumens per watt.



Comparison Chart Between LED Lights VS. Incandescent Bulbs VS. CFLs

Energy Efficiency & Energy Costs	 Lights Emitting Diodes (LEDs)	 Incandescent Light Bulbs	 Compact Fluorescents (CFLs)
Life Span (average)	50.000 hours	1.200 hours	8.000 hours
Watts of electricity used (equivalent to 60 watt bulb) LEDs use less power (watts) per unit of light generated (lumens). LEDs help reduce greenhouse gas emissions from power plants and lower electric bills	6 - 8 watts	60 watts	13-15 watts
Kilo-watts of Electricity used (30 Incandeseent Bulbs per year equivalent)	239 KWh/yr.	3285 KWh/yr.	767 KWh/yr.

LIGHT OUTPUT	 Lights Emitting Diodes (LEDs)	 Incandescent Light Bulbs	 Compact Fluorescents (CFLs)
Lumens	Watts	Watts	Watts
450	4-5	40	9-13
800	6-8	60	13-15
1.100	9-13	75	18-25
1.600	16-20	100	23-30
2.600	25-28	150	30-55

Recommended Light Levels

Common and Recommended Light Levels Indoors

The outdoor light level is approximately 10,000 lux on a clear day. In the building, in the area closest to windows, the light level may be reduced to approximately 1,000 lux. In the middle area its may be as low as 25 -50 lux. Additional lighting equipment is often necessary to compensate the low levels. Earlier it was common with light levels in the range 100 -300 lux for normal activities. Today the light level is more common in the range 500 -1000 lux-depending on activity. For precision and detailed works, the light level may even approach 1500 - 2000 lux. The table below is a guide for recommended light level in different workspaces:

Activity	Illumination(lux, lumen/m2)
<i>Public areas with dark surroundings</i>	<i>20 -50</i>
<i>Simple orientation for short visits</i>	<i>50 -100</i>
<i>Working areas where visual tasks are only occasionally performed</i>	<i>100 -150</i>
<i>Warehouses, Homes, Theaters, Archives</i>	<i>150</i>
<i>Easy Office Work, Classes</i>	<i>250</i>
<i>Normal Office Work, PC Work, Study Library, Groceries, Show Rooms, Laboratories</i>	<i>500</i>
<i>Supermarkets, Mechanical Workshops, Office Landscapes</i>	<i>750</i>
<i>Normal Drawing Work, Detailed Mechanical Workshops, Operation Theatres</i>	<i>1,000</i>
<i>Detailed Drawing Work, Very Detailed Mechanical Works</i>	<i>1500 -2000</i>
<i>f visual tasks of low contrast and very small size for prolonged periods of time</i>	<i>2000 -5000</i>
<i>Performance of very prolonged and exacting visual tasks</i>	<i>5000 -10000</i>
<i>Performance of very special visual tasks of extremely low contrast and small size</i>	<i>10000 -20000</i>

Generally, factors that affect the effectiveness of illumination are quantity and quality of light, amount of flicker, amount of glare, contrast and shadows. Each factor must be adjusted differently to optimize illumination in emergency, safety, operations, and security situations, for instance. Lighting Standards also serve to address the plethora of other concerns associated with the design, placement, installation, and minimum energy requirements and efficient allocation of illumination in different locations with different purposes, as well as the efficiency, durability, cost, and maintainability.

Additional Recommended Light Levels Indoors

Office Space	
<i>Normal work station space, open or closed offices</i>	500
<i>ADP Areas</i>	500
<i>Conference Rooms</i>	300
<i>Training Rooms</i>	500
<i>Internal Corridors</i>	200
<i>Auditoria</i>	150-200
Public Areas	
<i>Entrance Lobbies, Atria</i>	200
<i>Elevator Lobbies, Public Corridors</i>	200
<i>Ped. Tunnels and Bridges</i>	200
<i>Stairwells</i>	200
Support Spaces	
<i>Toilets</i>	200
<i>Staff Locker Rooms</i>	200
<i>Storage Rooms, Janitors' Closets</i>	200
<i>Electrical Rooms, Generator Rooms</i>	200
<i>Mechanical Rooms</i>	200
<i>Communications Rooms</i>	200
<i>Maintenance Shops</i>	200
<i>Loading Docks</i>	200
<i>Trash Rooms</i>	200
Specialty Areas	
<i>Dining Areas</i>	150-200
<i>Kitchens</i>	500
<i>Outleased Space</i>	500
<i>Physical Fitness Space</i>	500
<i>Child Care Centers</i>	500
<i>Structured Parking, General Space</i>	50
<i>Structured Parking, Intersections</i>	100
<i>Structured Parking, Entrances</i>	500

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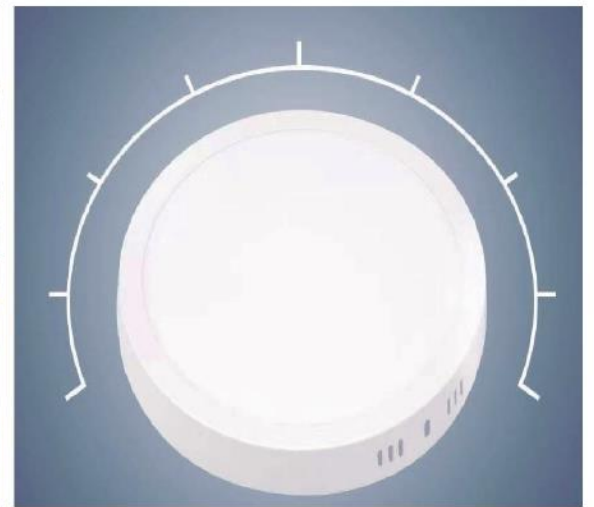
Marked Power	Voltage	LED color	Luminous Efficiency	CRI	PF	IP	Dimension		Body Material	PCS/CTN	Carton(cm)			CBM/CTN
							Frame	Hole			L	W	H	
7W	AC110-265V 50/60Hz	7000K/ 3000K/ 4000K	100~120 lm/W	80Ra	0.9	IP20	Ø90*H40mm	Ø75mm	+Aluminum	100	52	27	42	0.0590
10W							Ø130*H50mm	Ø110mm		50	67	27	28	0.0507
15W							Ø160*H50mm	Ø140mm		30	51	29	35	0.0518
20W							Ø190*H50mm	Ø160mm		30	60	29.0	41	0.0713
30W							Ø220*H55mm	Ø200mm		20	47	29.0	47	0.0641



Marked Power	Voltage	LED color	Luminous Efficiency	CRI	PF	IP	Dimension		Body Material	PCS/CTN	Carton			CBM/CTN
							Frame	Hole			L	W	H	
30W	AC110-265V 50/60Hz	7000K/ 3000K/ 4000K	100~120 lm/W	80Ra	0.9	IP20	Ø170*H38mm		+Aluminum	20	49	27	49	0.0648
40W							Ø225*H40mm			10	64	27	33	0.057
50W							Ø300H*45mm			10	64	27	33	0.057



Marked Power	VOLT age	LED color	Lumino us Efficien	CRI	PF	IP	Dimension		Bo d y Ma	PCS/ CTN	Carton(cm)			CBM/ CTN
							Frame	Hole			L	W	H	
3W	AC100-240V 50/60Hz	7000K/ 3000K/ 4000K/ 3color	80~90 lm/W	80Ra	0.9	IP20	Ø85mm	Ø70mm	PC+Alumi nium	100	47.0	30.0	28.0	0.0395
6W							Ø120mm	Ø105mm		100	63.0	30.0	31.0	0.0586
12W							Ø165mm	Ø140mm		40	42.0	30.0	36.0	0.0454
18W							Ø225mm	Ø205mm		20	47.0	30.0	27.0	0.0381
24W							Ø300mm	Ø285mm		20	62.0	29.5	34.0	0.0622



Marked Power	VOLT age	LED color	Lumino us Efficien	CRI	PF	IP	Dimension		Bo d y Ma	PCS/ CTN	Carton			CBM/ CTN
							Frame	Hole			L	W	H	
6W	AC100-240V 50/60Hz	7000K/ 3000K/ 4000K/ 3color	80~90 lm/W	80Ra	0.9	IP20	Ø108*H32mm		PC+Alumi nium	50	40.0	22.0	24.0	0.0211
12W							Ø155*H32mm			40	53.0	32.0	20.0	0.0339
20W							Ø210*H32mm			20	45.0	32.0	23.5	0.0338
36W							Ø285*H32mm			20	60.0	32.0	31.0	0.0595





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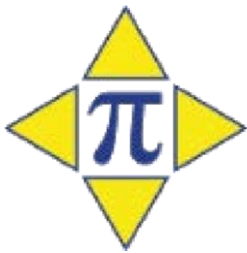


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