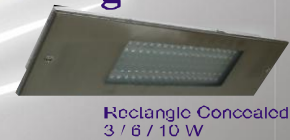




Introducing LED Lighting System

Useful For Commercial Houses, industries, Malls & Residence Etc...
One Time Investment And Lifetime Savings.



- Eco Friendly in nature,
Safe for eyes and skin,
No emissions of Carbon & UV rays.
- The Next Generation Lights.
- Reduces Electricity Bill Drastically.
- Saving in Cable Cost.
- Reduces Heat Load on Air conditioner.
- Frequent on-off switching has no effect on life.
- 10 Times more longer life span
than Conventional bulbs

**Light & Money?
Have to think!**

Comparison Chart

TYPE OF LIGHT	AVERAGE LIFE HOURS	NO OF TIME REPLACE IN 10 YEARS
LED Lighting	>0,000 hrs (10 Years)	Buy Once
Fluorescent / CFLs	6-8,000 hrs (1-5 Years)	Buy 6 Times
Incandescent	1,000 hrs (Less Than 6)	Buy 20 Times

Promoting Green Energy

Trade Inquiry welcome

Sales Office : US HOLIDAYS HOUSE, G - 42, Juhu Gaonthan No.2, Juhu Church Road, Opp. Juhu Club, Juhu, Mumbai - 400 049.

Tel. : +91-22-22908442 Fax : +91 22 26201124 Website : www.usolidays.net www.apexelectromec.biz led-solar E-mail : sales@apexelectromec.biz

APEX LED LIGHTING SYSTEMS

We, the **“A US Holidays Group”**, pride ourselves on being proactive in understanding the needs of modern 21st century living. We are committed to development of eco friendly and state-of-the-art solutions applied to our real estate projects. We have a 15 year international pedigree across various quality residential developments, mainly in Florida and the Dominican Republic, serving thousands of people. We now bring this wealth of experience to infrastructural development with a motto to keep our planet safe, clean & healthy. It is with great pride that we now introduce our latest product, *APEX LED LIGHTING*. LED technology has progressed massively in recent times and can assist in protection from various harmful Ultraviolet Rays that penetrate the world's protective Ozone Layer. The usage of LED's in lighting reduces the effect of Global Warming and also reduces the emission of Carbon pollutants into the atmosphere.

LED LIGHTS



ONE TIME INVESTMENT

AND

LIFETIME SAVINGS.

What is LED?

- Light-Emitting Diodes, known as LEDs, is a device which emits light when an electric current passes through it.
- LEDs are small, solid light bulbs which are extremely energy-efficient.
- An LED light is the bi-product of electricity jumping between two different alloys. This produces a small amount of light and depending upon the alloys, the color is dictated. These lights contain semiconductor chips that are made from ultra-high-purity materials under tightly controlled conditions.

Benefits Of LED Lights:-

1.Eco Friendly in nature : It doesn't emit Carbon & UV rays .

Eco- Friendly Lights as Led lighting does not produce any ultraviolet (UV) light. Ultraviolet rays are harmful for skin and eyes. They are made from non-toxic materials and can be recycled. Led lights emit no damaging ultraviolet light, so they will not cause fading and aging of artwork or other sensitive materials.

Are extremely efficient at converting electric power into visible light (currently up to 5x more efficient than standard light bulbs) as well as producing no infrared light that provides the warming effect experienced with normal filament-type bulbs. Thus reducing the effects of Global Warming On Earth.

2.Safe for Eyes and Skin

LED Lights contains no harmful materials such as lead or mercury or other dangerous substances that can be damaging to human health and environment.

3.The Next Generation Lights:

These bulbs are less popular than CFL but are quickly gaining popularity as they become more available for commercial and residential lighting needs

4.Reduces Electricity Bill Drastically:

Let's consider the cost aspect of the benefits of LED lighting. There are two reasons why LED bulbs save money. The first reason is because they use less energy. It is this reason that accounts for most of the cost savings of LED lighting. The second reason is a result that follows from the fact that the LED bulbs last longer. Due to the longer life of LED lights the frequency of replacements is much lower. This saves on new fixture purchases and costly maintenance. When comparing cost both energy savings and replacement savings should be taken into account. Led lighting saves electricity. The long life of led light bulbs reduce the time, effort and cost of replacement.

5.Saving in Cable Cost:

In CFL Lights, the wattage required is more and hence the wire used for installation should be thick, which increases the cost, while, LED Bulbs, costs less, because of less Wattage, the wires thickness is less.

LED Lights are also cost effective as although LEDs are expensive, the cost is recouped over time and in battery savings. Most consumers do not recognize the lower cost due to the comparatively high purchase price of LED bulbs. The purchase price is much higher than that of incandescent or CFL lights. In difficult economic times many are skeptical of making the investment. However, the lower energy use and longer life of the LED bulbs must be considered to get a fair comparison.

6.Reduces Heat Load on Air Conditioner:

Led lights also generate very little unwanted heat. The energy savings may be doubled in air-conditioned environments where each watt of incandescent lighting can add another watt or more to the power needed for air conditioning. Also, the high efficiency not only means lower energy consumption for the lighting itself, but less secondary heat generation leading to substantial savings in air conditioning costs as well.

7.Frequent On-Off Switching has no Effect on Life:

Unlike fluorescent bulbs which wear out much faster if they are frequently turned on and off, led bulbs are not affected by frequent on-off switching.

8. 10 Times more longer life span than conventional bulbs:

LED bulbs last up to 10 times longer than CFLs and consume anywhere from 1/3rd to 1/30th the electricity of a standard incandescent light bulb. The best characteristic of these bulbs is their extremely long life span, cause an Incandescent has a life of about 1000 hours, a Halogen about 2000 hours but LEDs are having a lifetime of over 50,000 hours; that means you will hardly have to change these bulbs! This saves costly electrician maintenance charges. One LED light bulb can easily outlast 30 Incandescent Bulbs, or 6 Compact Fluorescents!

9.Led lighting increases safety and security:

Led bulbs operate at much lower temperatures. More safer than Bulbs as they stay cool and pose less of a fire hazard. Halogen and incandescent lights are hot enough to cause fire, and they frequently do.

10.Instant Lighting:

There is no waiting for led light bulbs to warm up. Led bulbs light up instantly at full brightness, even in the coldest weather.

11.LEDs are Durable:

Since LEDs do not have a filament, they are not damaged under circumstances when a regular incandescent bulb or CFL would be broken. LED lights have no fragile filament to contend with, and no fragile tube. Because they are solid, LED bulbs hold up well to jarring and bumping. LEDs are sturdy bulbs as Durable plastic bulbs are less likely to break than traditional glass bulbs. Led light bulbs are less sensitive to heat, cold, shock, vibration, and the extreme temperature changes that can quickly ruin fragile incandescent bulbs. LEDs have several advantages over conventional incandescent lamps. For one thing, they don't have a filament that will burn out, so they last much longer.

12.Flexibility:

Additionally, their small plastic bulb makes them a lot more durable. They also fit more easily into modern electronic circuits.

13.Energy Efficient:

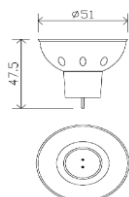
But the main advantage is efficiency. In conventional incandescent bulbs, the light-production process involves generating a lot of heat (the filament must be warmed). Lower energy consumption. LED Lights give high illumination, and are durable & cool, energy efficient as they use 90% less energy than regular lights. There is no emission of heat in LED Lights, as compared to incandescent. Therefore the energy is entirely converted into light and not heat. Whereas in other lights there is heat generation, therefore the partial energy is converted into heat and partial into light.

14.Focus Lighting:

LED Lights also emit a much higher percentage of light in the desired direction. This makes them even more efficient compared to either incandescent or fluorescent for task lighting, desk lamps, reading lights, spotlights, flood lights, and track lighting.

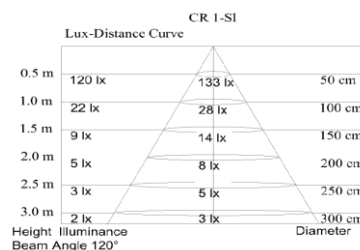
Product Technical Data Sheet

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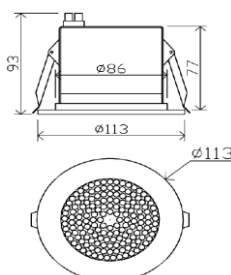


230V AC / 12V DC
1 Watt
Angle 120°

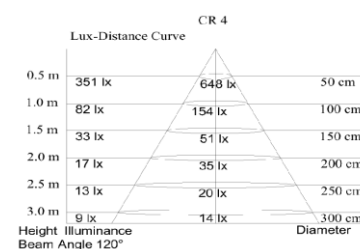
CR 1-SI



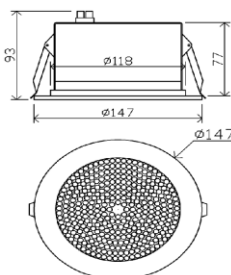
CR 4



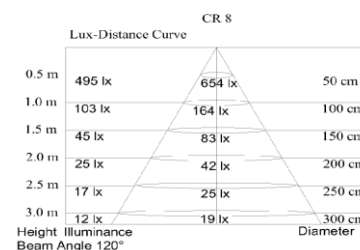
230V AC / 12V DC
4 Watt
Angle 120°



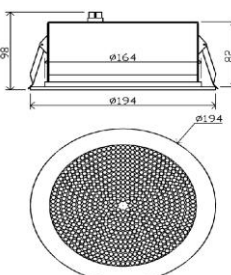
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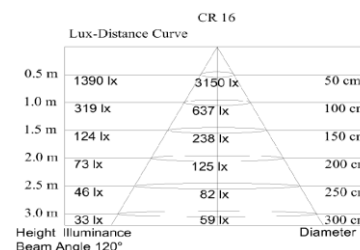
230V AC / 12V DC
8 Watt
Angle 120°



CR 16

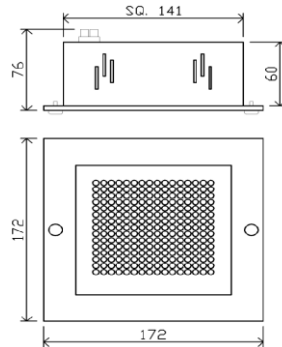
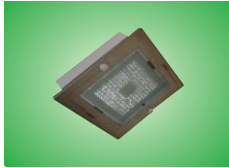


230V AC / 12V DC
16 Watt
Angle 120°

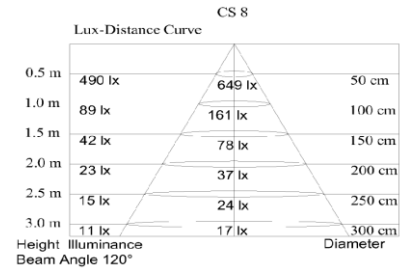


Product Technical Data Sheet

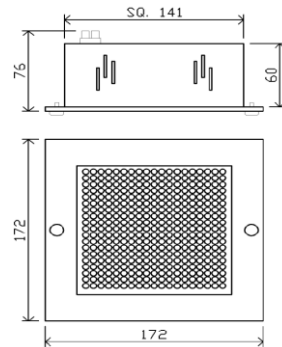
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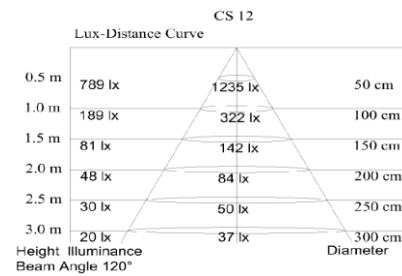
230V AC / 12V DC
8 Watt
Angle 120°



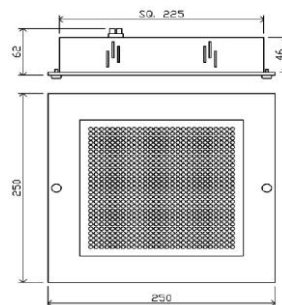
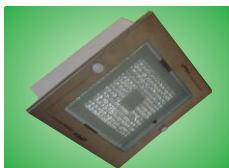
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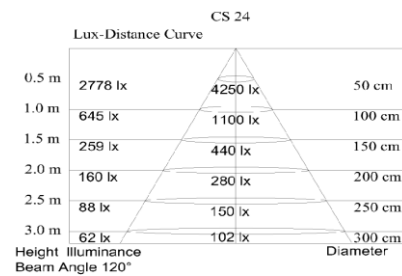
230V AC / 12V DC
12 Watt
Angle 120°



CS 24

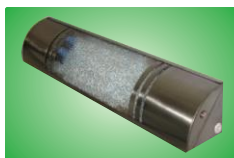


230V AC / 12V DC
24 Watt
Angle 120°

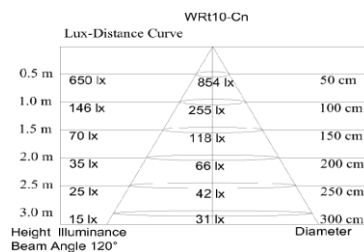


Product Technical Data Sheet

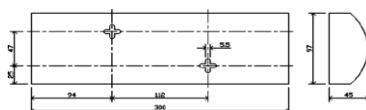
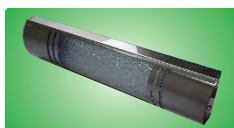
WRt 3Cn
WRt 6Cn
WRt 10Cn



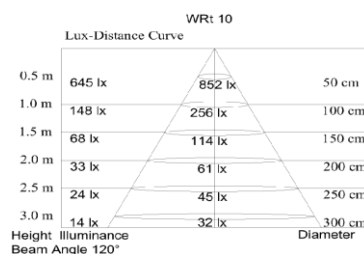
230V AC / 12V DC
3/6/10 Watt
Angle 120°



WRt 3
WRt 6
WRt 10



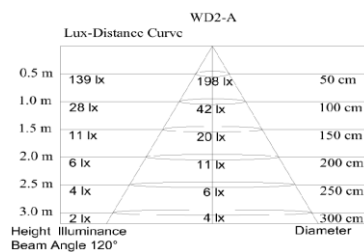
230V AC / 12V DC
3/6/10 Watt
Angle 120°



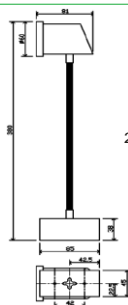
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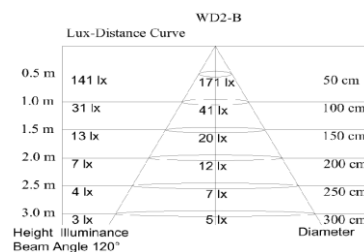
230V AC / 12V DC
2 Watt
Angle 120°



WD2-B

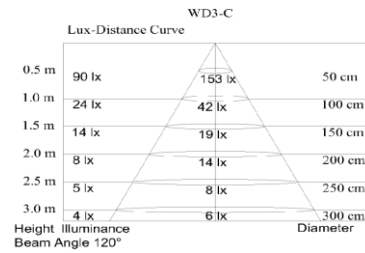
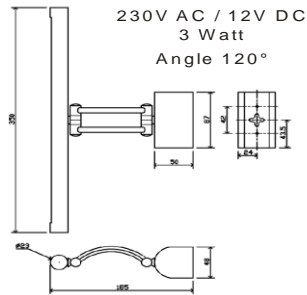
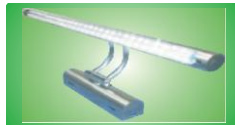


230V AC / 12V DC
2 Watt
Angle 120°

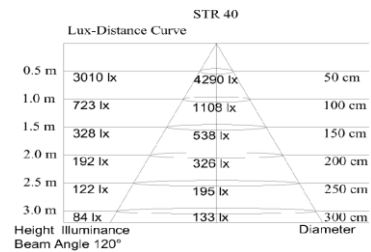
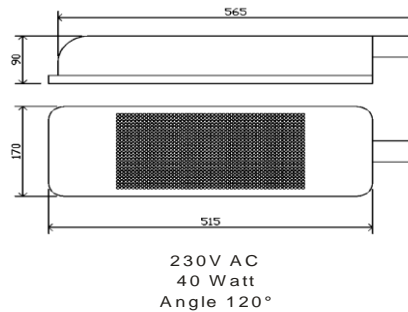


Product Technical Data Sheet

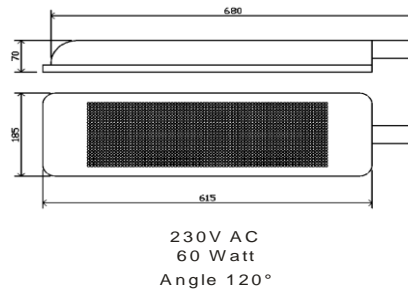
WD3-C



STR 40

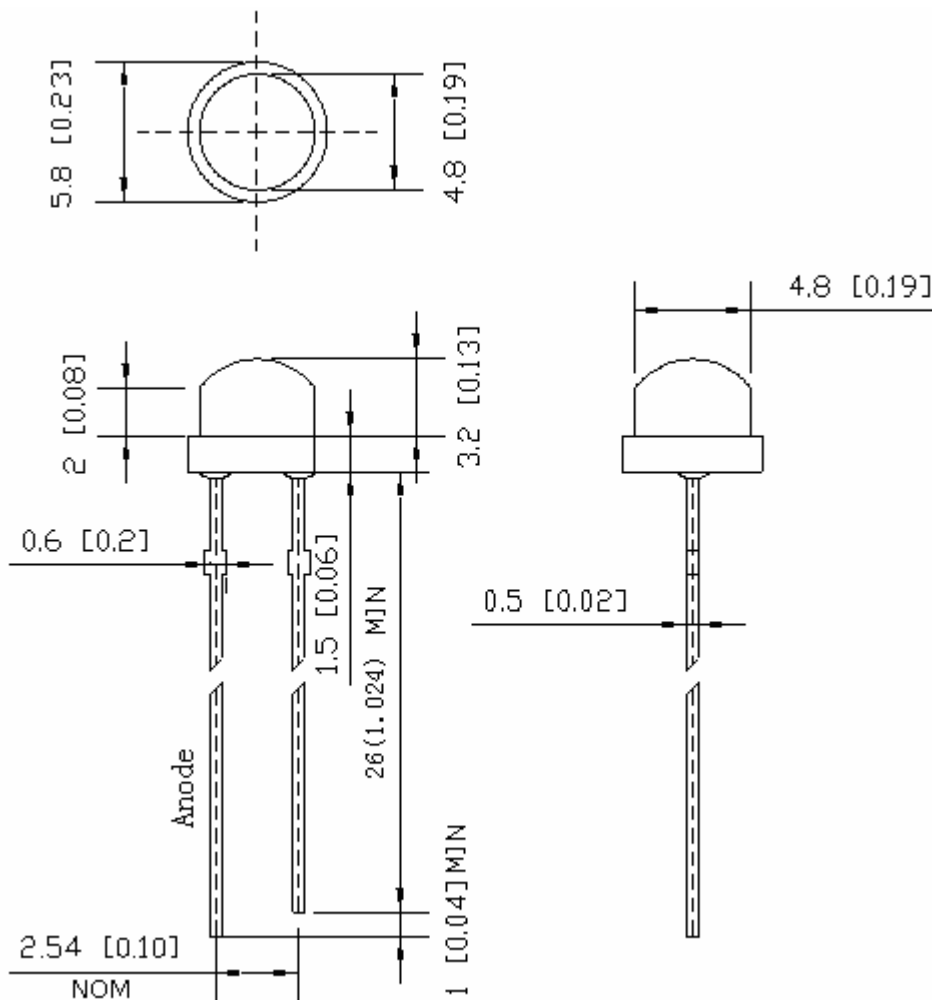


STR 60



LED Technical Data Sheet

Dimensions Of LED



Absolute Maximum Rating at Ta=25°C

Parameters	Symbol	Max.	Unit
Power Dissipation	PD	100	mW
Peak Forward Current (1/10 Duty Cycle ,0.1ms Pulse Width)	IFP	100	mA
Forward Current	IF	25	mA
Reverse Voltage	VR	5	V
Operating Temperature Range	Topr	-40 °C to +85 °C	
Storage Temperature Range	Tstg	-40 °C to +85 °C	
Lead Soldering Temperature	Tsld	260 °C for 5 sec.	

Notes :

- 1.Proper current derating must be observed to maintain junction temperature below the maximum.
- 2.LEDs are not designed to be driven in reverse bias.

Electrical Optical Characteristics at Ta =25 °C

Parameters	Symbol	Min.	Typ.	Max.	Unit	Test Condition
Viewing Angle	2θ _{1/2}	-----	140	----	Deg	IF = 20 mA
Forward voltage	V _F	2.8	3.3	3.8	V	IF = 20 mA
Reverse Current	I _R	---	---	10	μA	V _R = 5 V
Chromaticity Coordinates	X	----	0.28	---	---	IF = 20 mA
	Y	----	0.29	---	---	
Luminous Luminous	I _v	780	1300	---	mcd	IF = 20 mA

Notes :

- 1.Luminous Intensity Measurement allowance is +/- 10 %.
2. θ_{1/2} is the off axis angle at which the luminous intensity is half the axial luminous intensity.

Reliability Test Items And Conditions :

The reliability of products shall be satisfied with items listed below:

Confidence level : 90% , LTPD : 10%.

1) Test Items And Results :

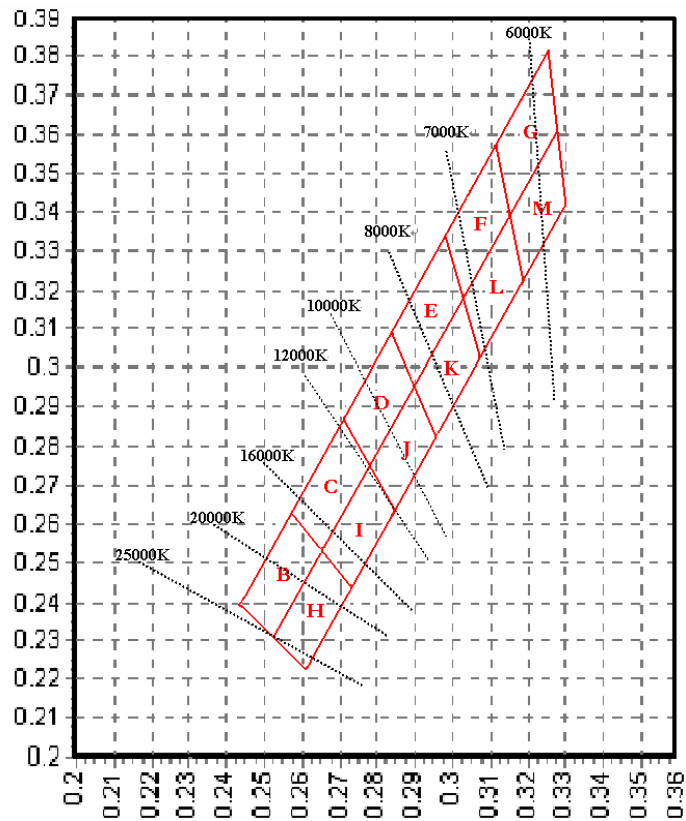
Test Item	Standard Test Method	Test Conditions	Note	Number Of Damaged
Resistance To Soldering Heat	JEITA ED-4701 300 302	Tsld =260±5°C, 10sec 4mm from the base of the epoxy bulb	1 time	0/100
Solder ability	JEITA ED-4701 300 303	Tsld =235±5°C, 5sec(using flux)	1 time Over 95%	0/100
Thermal Shock	JEITA ED-4701 100 105	0°C ~100°C 15sec, 15sec	100 Cycles	0/100
Temperature Cycle	JEITA ED-4701 100 105	-40°C~25°C~100°C ~25° 30min,5min, 30min,5min	100 Cycles	0/100
Moisture Resistance Cycle	JEITA ED-4701 200 203	25°C~65°~-10°C 90%RH 24hrs/1cycle	10 Cycle	0/100
High Temperature Storage	JEITA ED-4701 200 201	Ta=100°C	1000hrs	0/100
Terminal Strength (Pull test)	JEITA ED-4701 400 401	Load 10N(1kgf) 10±1sec	No noticeable damage	0/100
Terminal Strength (bending test)	JEITA ED-4701 400 401	Load 5N (0.5kgf) 0°~90°~0° bend 2 times	No noticeable damage	0/100
Temperature Humidity Storage	JEITA ED-4701 100 103	Ta=60°,RH=90%	1000hrs	0/100
Low Temperature Storage	JEITA ED-4701 200 202	Ta=-40°C	1000hrs	0/100
Steady State Operating Life		Ta=25°C,IF =30ma	1000hrs	0/100
Steady State Operating Life Of High Humidity Heat		Ta=60°C,RH=90% IF=30mA	500hrs	0/100
Steady State Operating Life Of Low Temperature		Ta=-30°C,IF=20mA	1000hrs	0/100

2) Criteria For Judging The Damage :

Item	Symbol	Test Conditions	Criteria for Judgment	
			MIN	Max
Forward Voltage	VF	IF=20mA	---	F.V.*)×1.1
Reverse Current	IR	VR=5v		F.V.*)×2.0
Luminous Intensity	IV	IF=20mA	F.V*)×0.7	----

*)F.V: First Value

CIE 1931 Chromaticity Diagram



IF=20mA. Ta=25°C

Bin Code	X	Y	Color(K)	Bin Code	X	Y	Color(K)
B	0.255	0.247	20000	H	0.263	0.237	20000
C	0.268	0.270	16000	I	0.275	0.259	16000
D	0.281	0.293	10000	J	0.288	0.279	10000
E	0.294	0.315	8000	K	0.299	0.300	8000
F	0.307	0.339	7000	L	0.311	0.321	7000
G	0.320	0.361	6000	M	0.323	0.341	6000

Measurement uncertainty of the color coordinates : ± 0.01

Typical Electrical / Optical Characteristic Curves

25°C Ambient Temperature Unless Otherwise Noted

