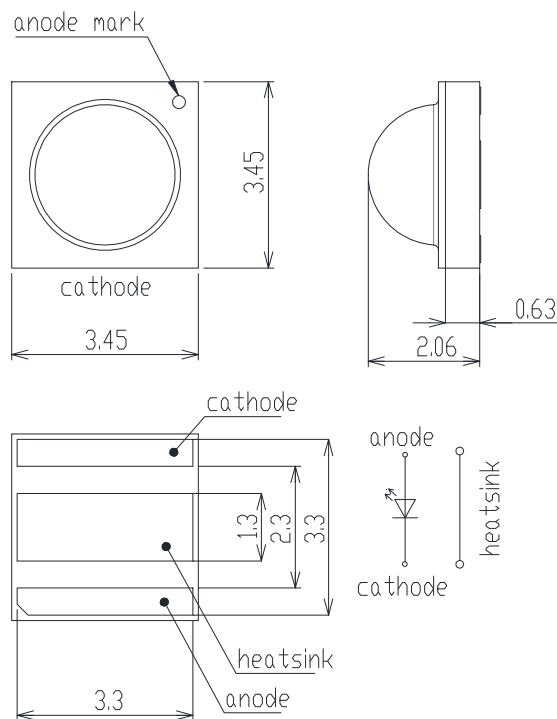Data Sheet

EDC630V-1100

630nm High Power TOP LED

Outline and **Internal Circuit**

(Unit : mm)

Features

- Chip Material : AlGaInP
- Chip Dimension : 1000um * 1000um
- Number of Chips : 1pce
- Peak Wavelength : 630nm typ.
- Lead Frame Die : Ceramics
- Lens : Silicone Resin

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Absolute Maximum Ratings (Tc=25°C)

Item	Symbol	Ratings	Unit
Power Dissipation	PD	2000	mW
Forward Current	IF	700	mA
Pulse Forward Current	IFP	2000	mA
Reverse Voltage	VR	5	V
Thermal Resistance	Rthja	10	K/W
Junction Temperature	Tj	120	°C
Operating Temperature	Topr	-40 ~ +100	°C
Storage Temperature	Tstg	-40 ~ +100	°C
Soldering Temperature	TSOL	250	°C

‡Pulse Forward Current condition : Duty 1% and Pulse Width=10us.

‡Soldering condition : Soldering condition must be completed with 5 seconds at 250°C.

## Optical and Electrical Characteristics (Tc=25°C)

| Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
Forward Voltage	VF		2.2	2.8	V	IF=350mA
	VFP		3.5			IFP=2A
Total Radiated Power	PO		270		mW	IF=350mA
			1300			IFP=2A
Radiant Intensity	IE		160		mW/sr	IF=350mA
			800			IFP=2A
Luminous Flux	Φv		60		lm	IF=350mA
Peak Wavelength	λp	620		640	nm	IF=350mA
Dominant Wavelength	λD		622		nm	IF=350mA
Half Width	Δλ		15		nm	IF=350mA
Viewing Half Angle	θ1/2		±62		deg.	IF=100mA
Rise Time	tr		60		ns	IF=350mA
Fall Time	tf		20		ns	IF=350mA

‡ Radiated Power is measured by S3584-08.

‡ Radiant Intensity is measured by CIE127-2007 Condition B.
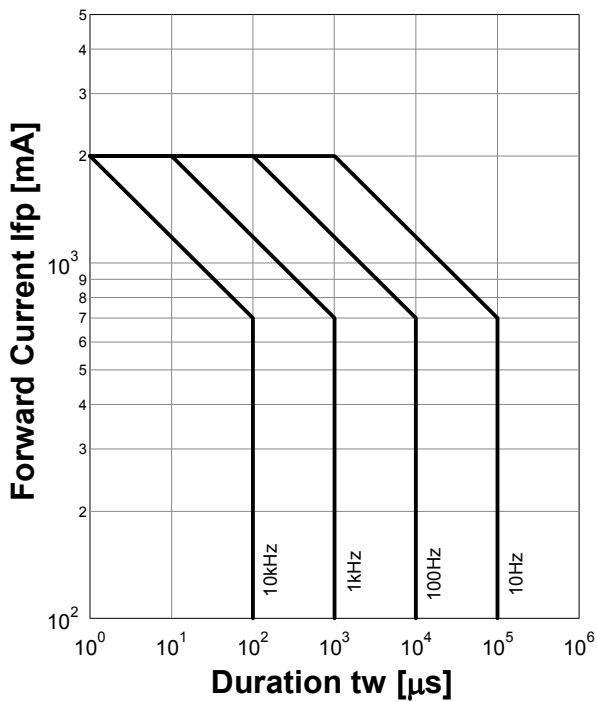
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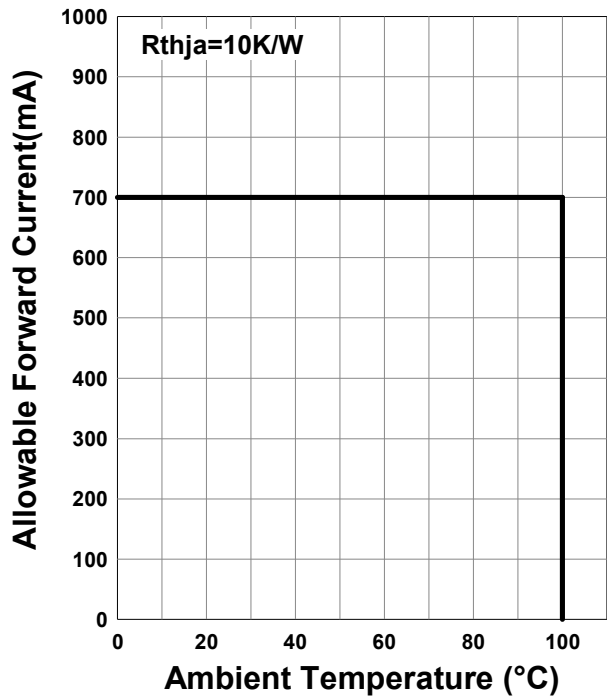**Typical Characteristic Curves**

Forward Current - Forward Voltage

(ta=25°C, tw=10μs, Duty=1%)

Forward Current (mA) vs Forward Voltage (V)
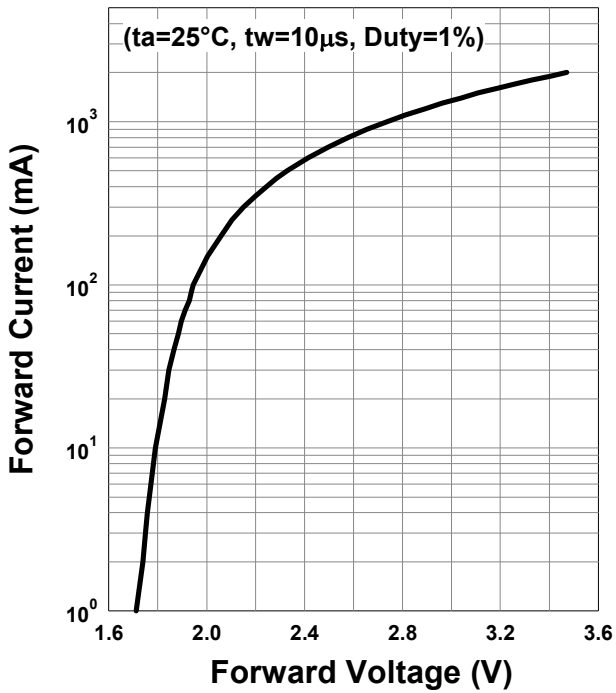
Relative Radiant Intensity - Forward Current

(ta=25°C, tw=10μs, Duty=1%)

350mA Standard

Relative Radiant Intensity (A.U.) vs Forward Current (mA)
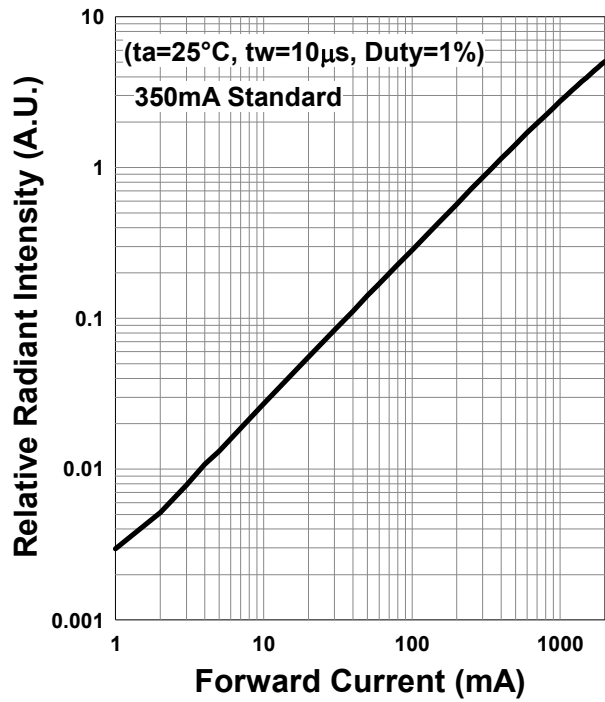
Forward Current - Pulse Duration

Forward Current Ifp [mA] vs Duration tw [μs]

10kHz   1kHz   100Hz   10Hz

Allowable Forward Current - Ambient Temperature

Rthja=10K/W

Allowable Forward Current(mA) vs Ambient Temperature (°C)

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Forward Voltage - Ambient Temperture

If=350mA

Forward Voltage (V) vs Ambient Temperature (°C)
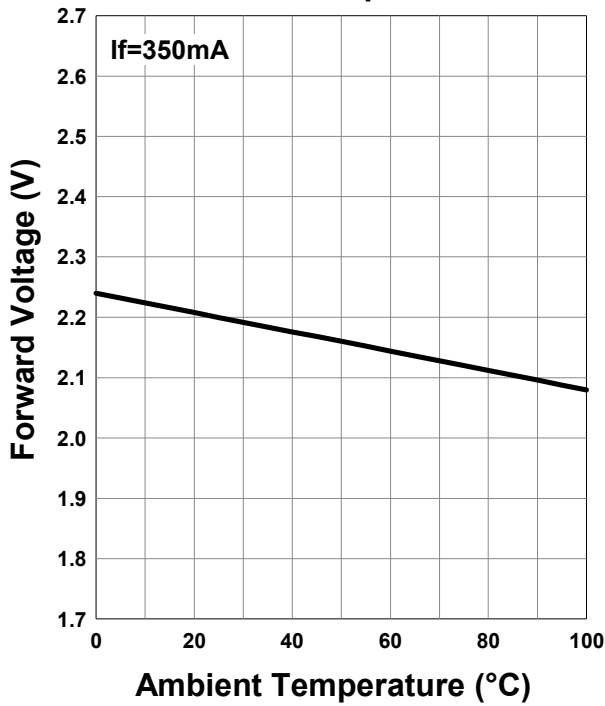
Relative Radiant Intensity - Ambient Temperature

If=350mA

Relative Radiant Intensity (A.U.) vs Ambient Temperature (°C)
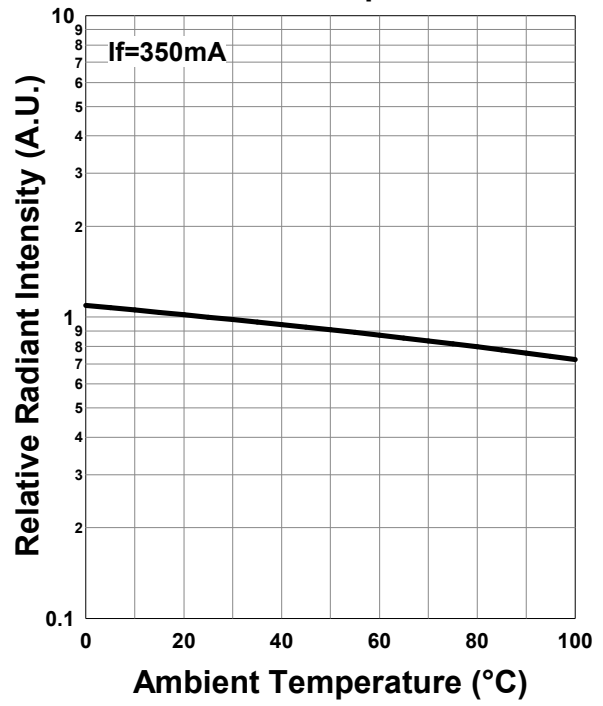
Peak Wavelength - Ambient Temperature

If=350mA

Peak Wavelength (nm) vs Ambient Temperature (°C)

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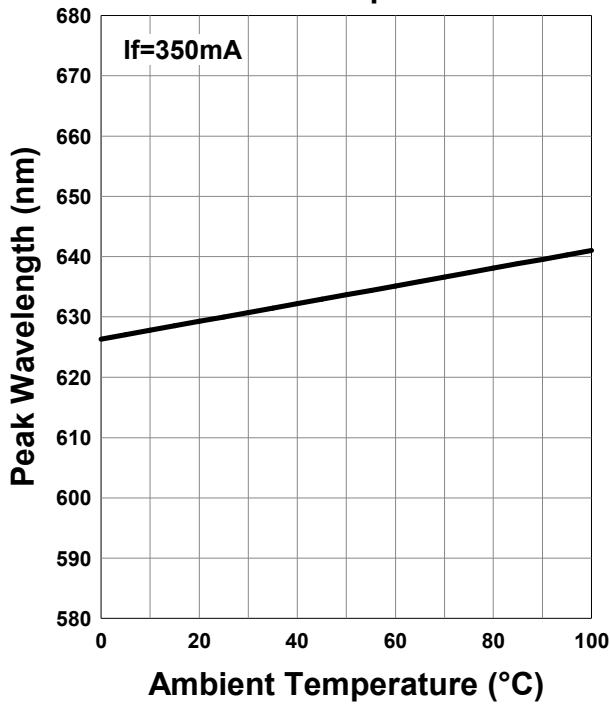
Relative Spectral Emission
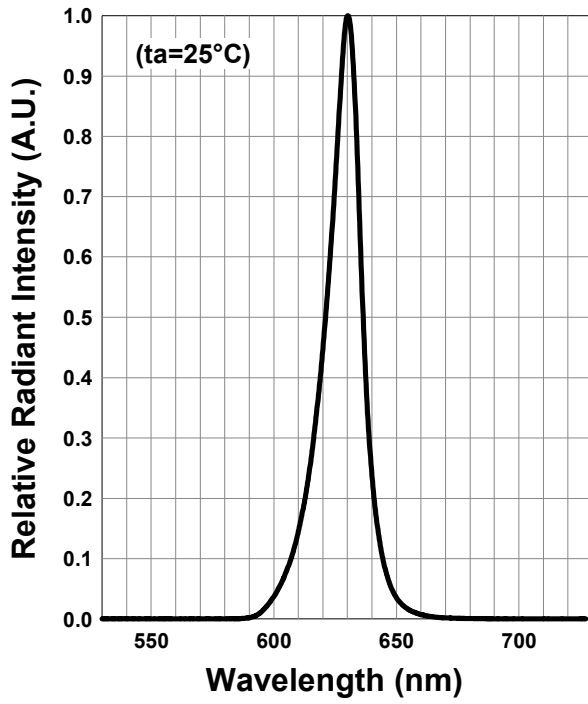
Relative Radiant Intensity (A.U.) vs Wavelength (nm)
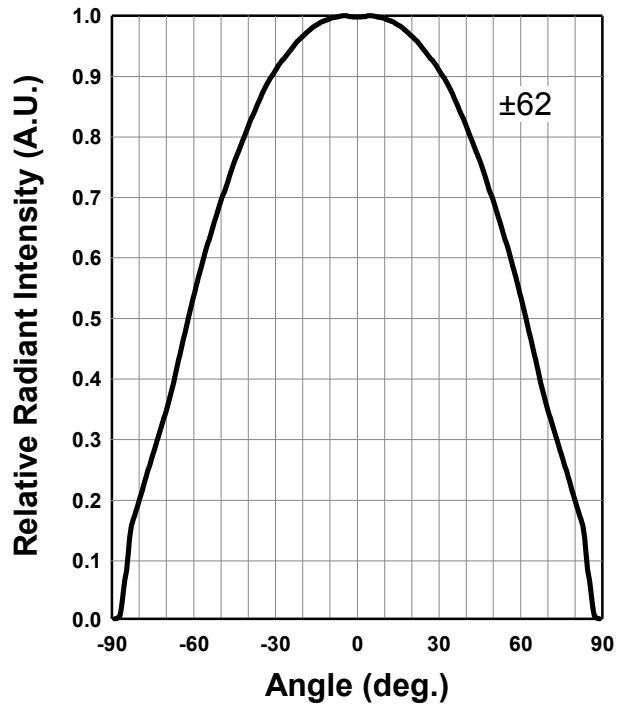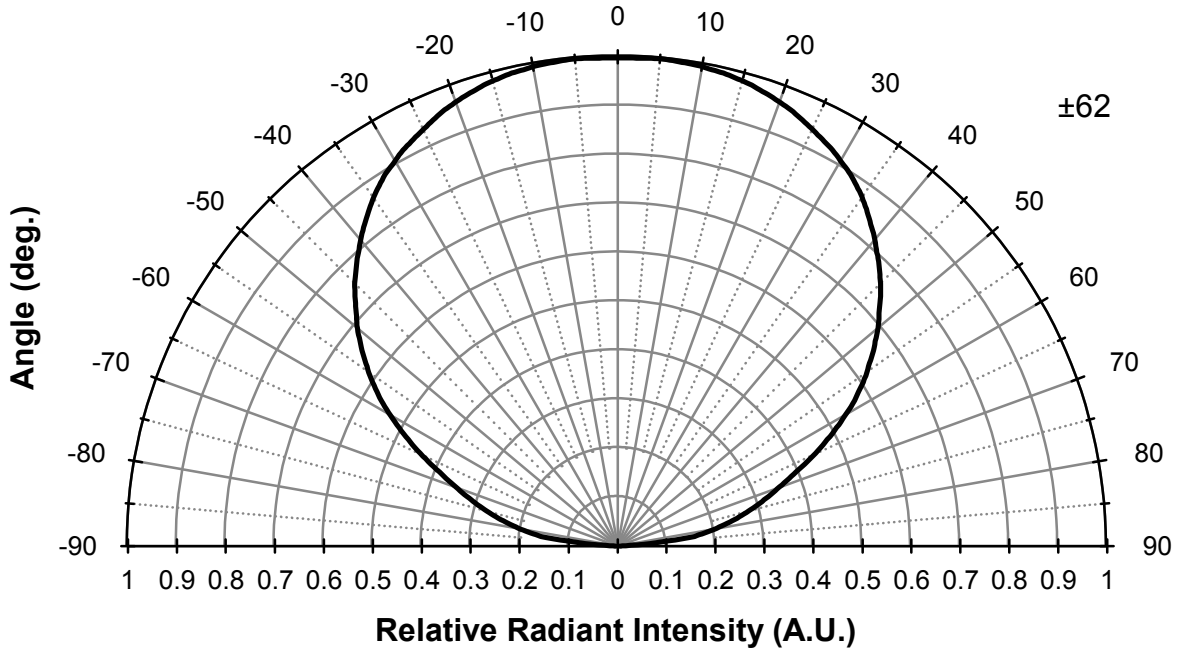
(ta=25°C)

Radiation Characteristics

Relative Radiant Intensity (A.U.) vs Angle (deg.)

±62

Radiation Characteristics

Angle (deg.) vs Relative Radiant Intensity (A.U.)

±62

SMD LED storage and handling precautions

Storage Conditions before Opening a Moisture-Barrier Aluminum Bag

● Before opening a moisture-barrier aluminum bag, please store it at <30ºC, <60%

● RH. Please note that the maximum shelf life is 12 months under these conditions.

Storage Conditions after Opening a Moisture-Barrier Aluminum Bag

● After opening a moisture-barrier aluminum bag, store the aluminum bag and silica gel in a desiccator.

● After opening the bag, please solder the LEDs within 72 hours in a room with 5 - 30ºC, <50%RH.

● Please put any unused, remaining LEDs and silica gel back in the same aluminum bag and then vacuum-seal the bag.

● It is recommended to keep the re-sealed bag in a desiccator at <30%RH.

● The 72-hour- long floor life does not include the time while LEDs are stored in the moisture-barrier aluminum bag. However, we strongly recommend to solder the LEDs as soon as possible after opening the aluminum bag

Notes about Re-sealing a Moisture-Barrier Aluminum Bag

● When vacuum-sealing an opened aluminum bag, if you find the moisture-indicator of the silica gel has changed to pink from blue (indicating a relative humidity of 30 % or more), please do not use the unused LEDs, the aluminum bag, or the silica gel.

Notes about Opening a Re-sealed Moisture-Barrier Aluminum Bag

● When opening a vacuumed and re-sealed aluminum bag in order to use the remaining LEDs stored in the bag, if you find that the moisture-indicator of the silica has changed to pink, please do not use the LEDs.

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Disclaimer

Product specifications and data shown in this product catalog are subject to change without notice for the purposes of improving product performance, reliability, design, or otherwise.

Product data and parameters in this catalog are typical values based on reasonably up-to-date measurements. Product data and parameters may vary by user application and over time.

Products shown in this catalog are intended to be used for general electronic equipment. Products are not guaranteed for applications where product malfunction or failure may cause personal injury or death, including but not limited to life-supporting / saving devices, medical devices, safety devices, airplanes, aerospace equipment, automobiles, traffic control systems, and nuclear reactor control systems.