



EVERLIGHT ELECTRONICS CO.,LTD.

Device Number : CDLE-020-280 REV.: 1

3.0mm Round Type LED Lamps

PART NO. : 204HD ECN : _____ Page: 1/4

■ Features :

- Choice of various viewing angles
- Available on tape and reel.
- Reliable and robust

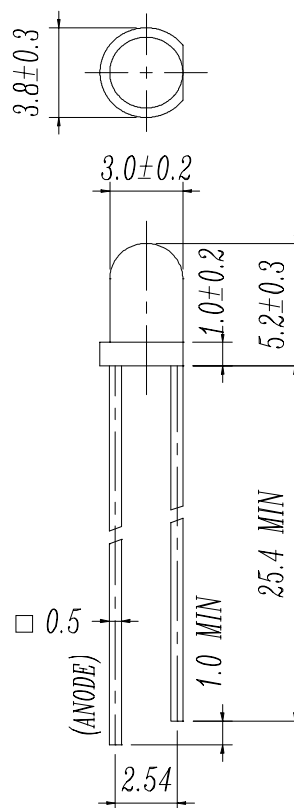
■ Descriptions :

- The series is specially designed for applications requiring higher brightness
- The led lamps are available with different colors, intensities, epoxy colors, etc.

■ Applications :

- TV set
- Monitor
- Telephone
- Computer

■ Package Dimensions:



■ Notes :

1. All dimensions are in millimeters.
2. An epoxy meniscus may extend about 1.5mm(0.059") down to the lead.
3. Tolerances unless Dimension $\pm 0.25\text{mm}$.

PART NO.	Chip		Lens Color
	Material	Emitted Color	
204HD	GaP	Bright Red	Red Diffused

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■ Absolute Maximum Ratings at Ta = 25°C

Parameter	Symbol	Rating	Unit
Forward Current	IF	15	mA
Operating Temperature	Topr	-40 to +85	°C
Storage Temperature	Tstg	-40 to +100	°C
Soldering Temperature	Tsol	260 ± 5	°C
Power Dissipation	Pd	45	mW
Peak Forward Current(Duty 1/10 @ 1KHz)	IF(Peak)	50	mA
Reverse Voltage	VR	5	V

■ Electronic Optical Characteristics :

Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
Luminous Intensity	Iv	0.50	1.00	/	mcd	IF= 10 mA
Viewing Angle	2 θ 1/2	/	60	/	deg	IF= 10 mA
Peak Wavelength	λ p	/	697	/	nm	IF= 10 mA
Dominant Wavelength	λ d	/	650	/	nm	IF= 10 mA
Spectrum Radiation Bandwidth	△ λ	/	90	/	nm	IF= 10 mA
Forward Voltage	VF	1.50	2.00	2.40	V	IF= 10 mA
Reverse Current	IR	/	/	10	μ A	VR= 5 V



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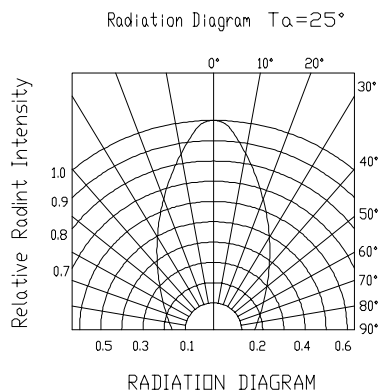
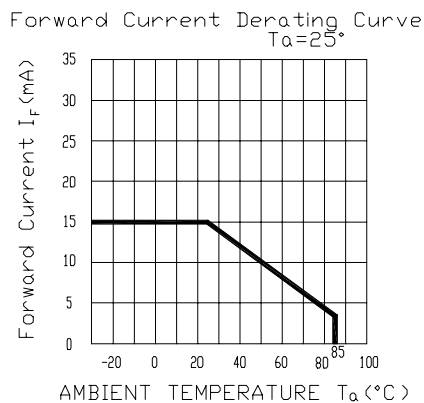
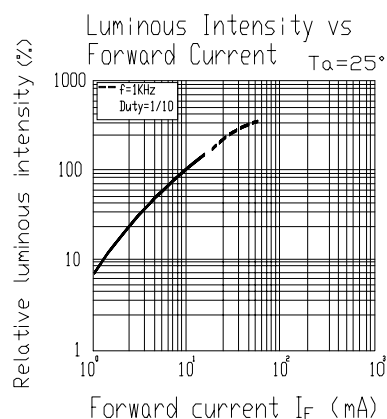
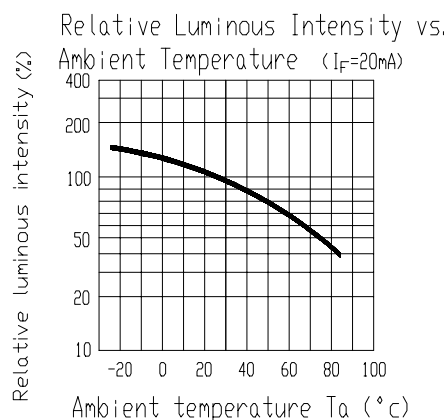
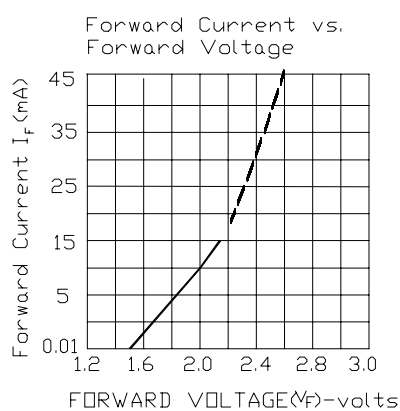
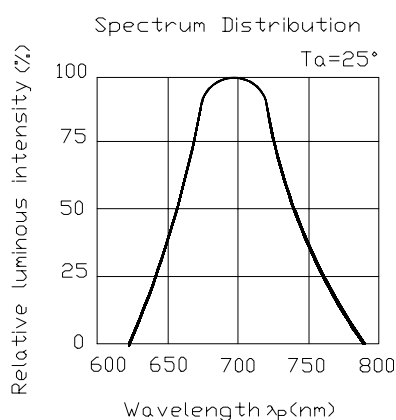
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■ Typical Electro-Optical Characteristic Curves:

(H)





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■ Reliability test items and conditions:

NO	Item	Test Conditions	Test Hours/Cycle	Sample Size	Ac/Re
1	Solder Heat	TEMP : 260°C ± 5 °C	5 SEC	76 PCS	0/1
2	Temperature Cycle	H : +85°C 30min § 5 min L : -55°C 30min	50 CYCLES	76 PCS	0/1
3	Thermal Shock	H : +100°C 5min § 10 sec	50 CYCLES	76 PCS	0/1
4	High Temperature Storage	TEMP : 100°C	1000 HRS	76 PCS	0/1
5	Low Temperature Storage	TEMP : -55°C	1000 HRS	76 PCS	0/1
6	DC Operating Life	TEMP : 25°C IF =10 mA	1000 HRS	76 PCS	0/1
7	High Temperature / High Humidity	85°C / 85% RH	1000 HRS	76 PCS	0/1