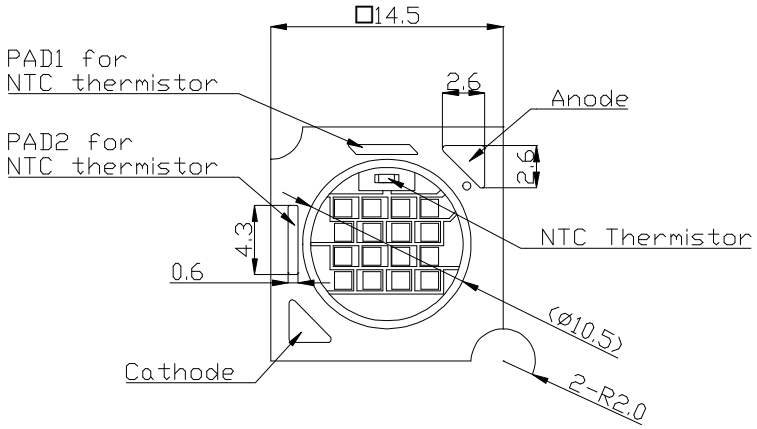
2022.04

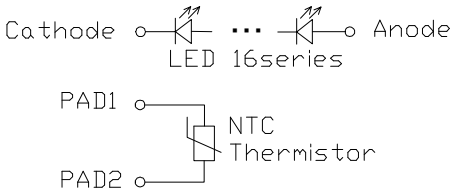
PRELIMINARY

COB1550D-16100S

COB type LED

Outline and Internal Circuit





(Unit : mm)

Features

- Chip Material : InGaAsP
- Chip Dimension : 1000um * 1000um
- Number of Chips : 16pcs
- Peak Wavelength : 1550nm typ.
- Lead Frame Die : Aluminum
- Lens : Silicone resin

Absolute Maximum Ratings (Tc=25°C)

Item	Symbol	Ratings	Unit
Power Dissipation	PD	28	W
Forward Current	IF	1000	mA
Pulse Forward Current	IFP	(2000)	mA
Reverse Voltage	VR	48	V
Thermal Resistance	Rthjs	5	K/W
Junction Temperature	Tj	120	°C
Operating Temperature	Topr	-40 ~ +85	°C
Storage Temperature	Tstg	-40 ~ +100	°C
Soldering Temperature	TSOL	250	°C

‡Soldering condition : Refer to technical support information on the website.

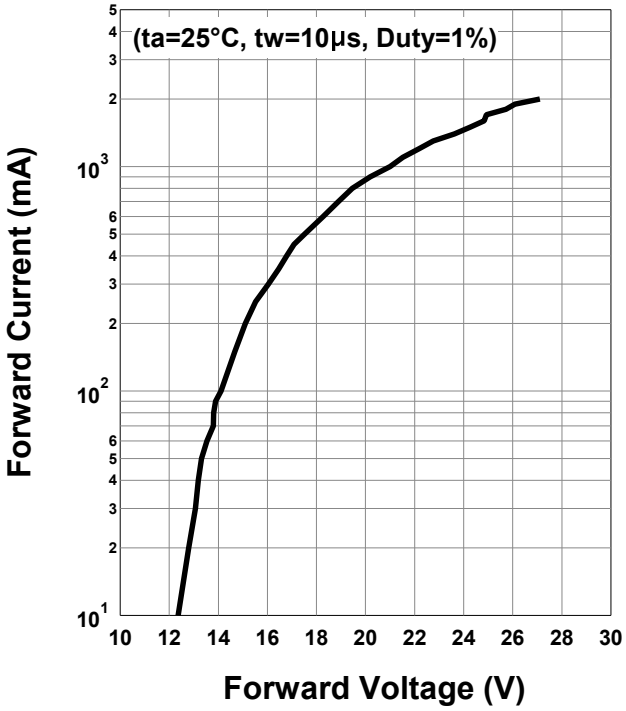
Optical and Electrical Characteristics (Tc=25°C)

Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
Forward Voltage	VF		21	(28)	V	IF=1A t=20ms
Reverse Current	IR			10	uA	VR=48V
Total Radiated Power	PO		(600)		mW	IF=1A t=20ms
Peak Wavelength	λp	1500		1600	nm	IF=1A t=20ms
Half Width	Δλ		120		nm	IF=1A t=20ms
Viewing Half Angle	θ1/2		±65		deg.	IF=100mA
Rise Time	tr		90		ns	IF=1A
Fall Time	tf		30		ns	IF=1A

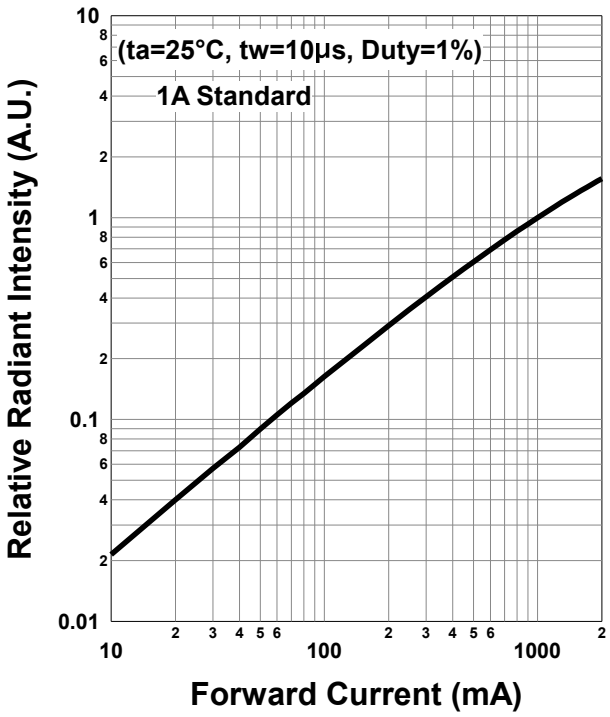
‡ Radiated Power is measured by G8370-85.

Typical Characteristic Curves

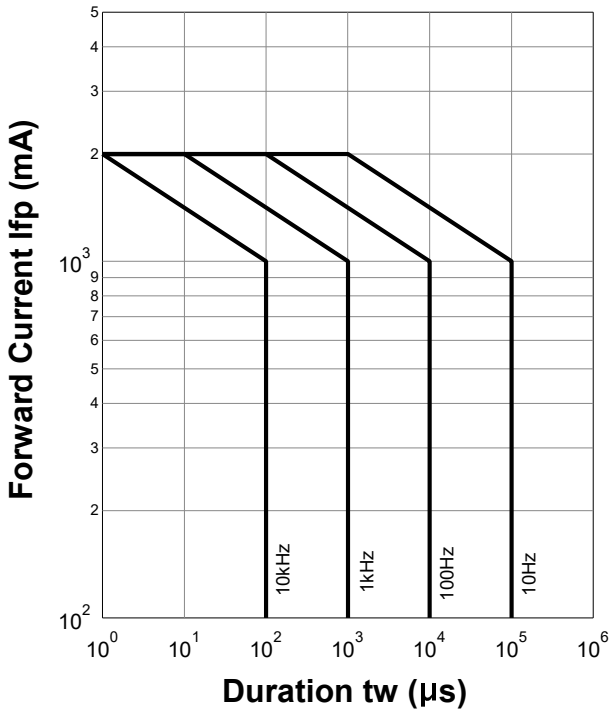
Forward Current - Forward Voltage

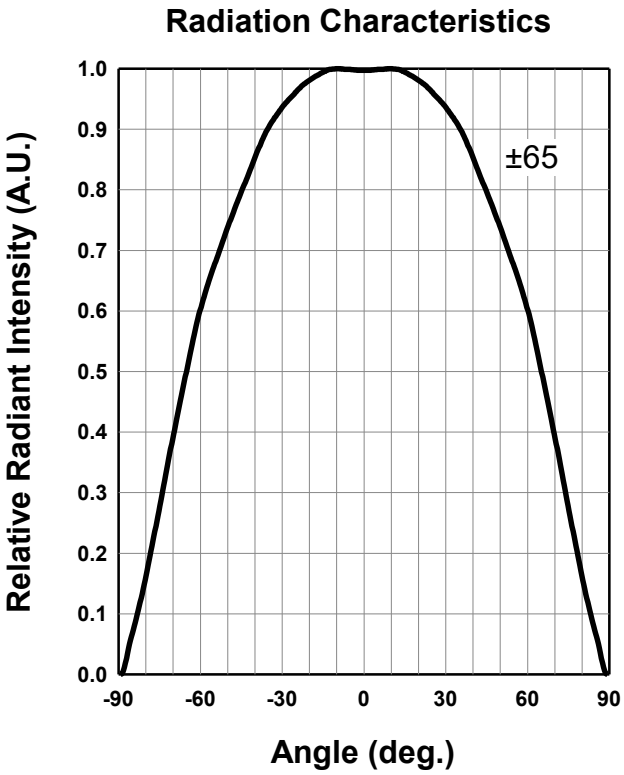


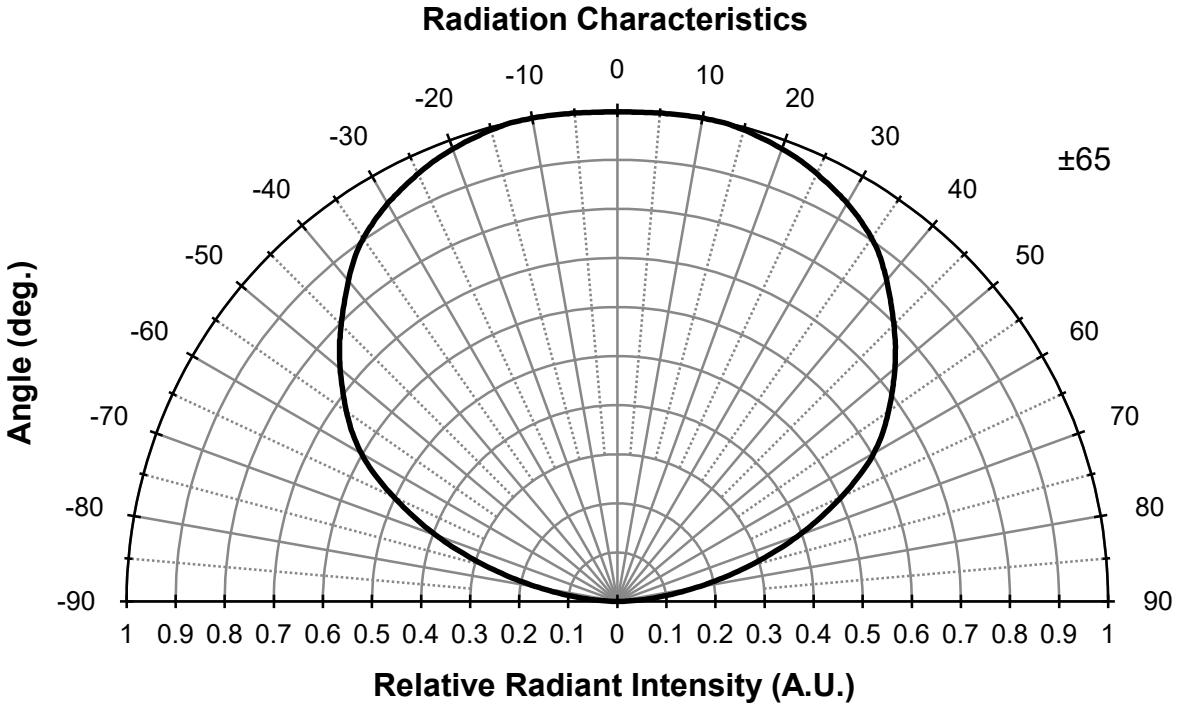
Relative Radiant Intensity - Forward Current



Forward Current - Pulse Duration

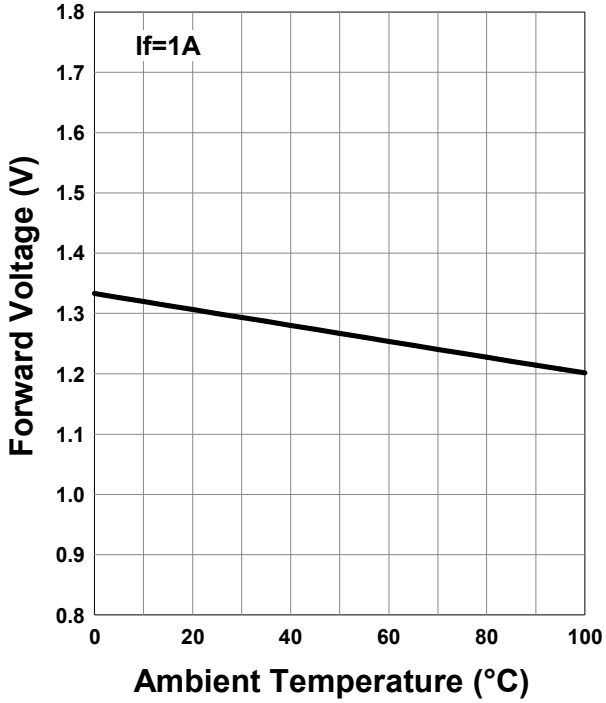



Radiation Characteristics
Relative Radiant Intensity (A.U.)
1.0
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.0
±65
-90
-60
-30
0
30
60
90
Angle (deg.)

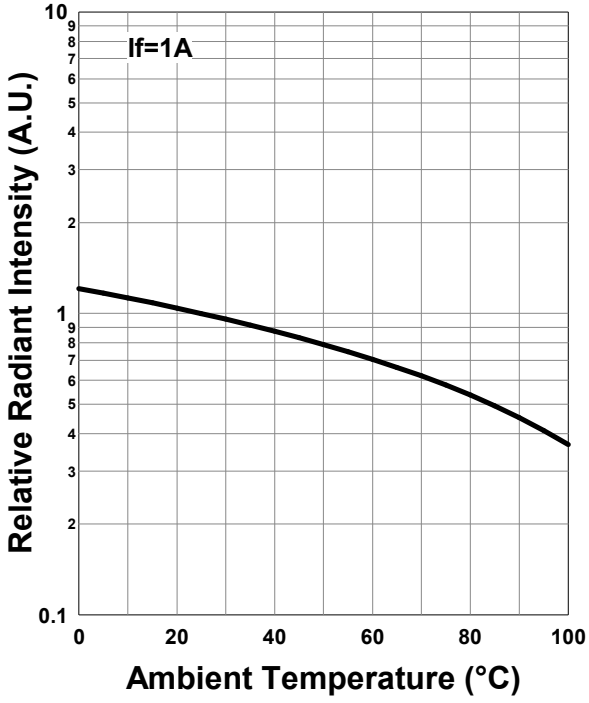

Radiation Characteristics
0
-10
10
-20
20
-30
30
-40
40
-50
50
-60
60
-70
70
-80
80
-90
90
±65
Angle (deg.)
1 0.9 0.8 0.7 0.6 0.5 0.4 0.3 0.2 0.1 0 0.1 0.2 0.3 0.4 0.5 0.6 0.7 0.8 0.9 1
Relative Radiant Intensity (A.U.)

*The data below shows the characteristics of one representative COB chip.

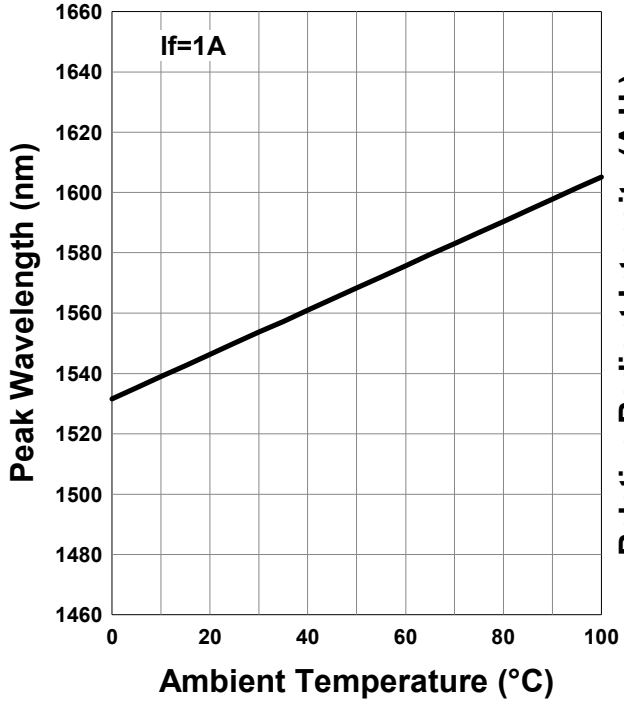
Forward Voltage - Ambient Temperture



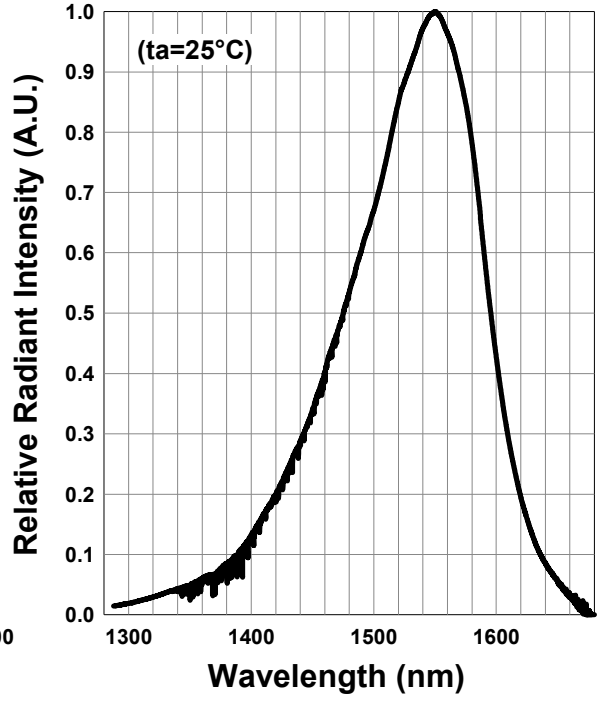
Relative Radiant Intensity - Ambient Temperature



Peak Wavelength - Ambient Temperature



Relative Spectral Emission



Disclaimer

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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.

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The product is manufactured by USHIO Inc. and the spec information is also from USHIO Inc.