

Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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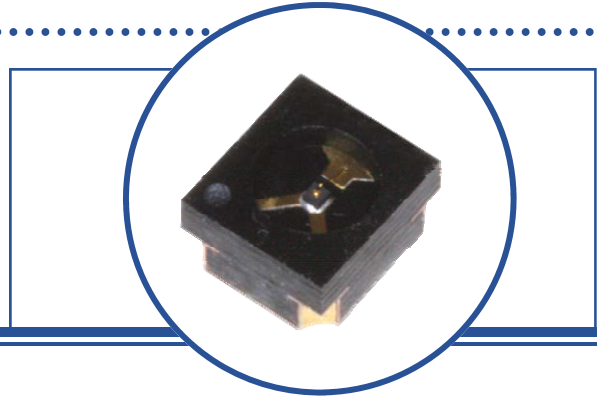
Infrared Light Emitting Diode

OPR2800, OPR2800T



Features:

- High-power GaAIAs
- Matches PLCC-2 footprint
- 880 nm wavelength
- Wide beam angle
- Wide operating temperature range (-40° C to +100° C)



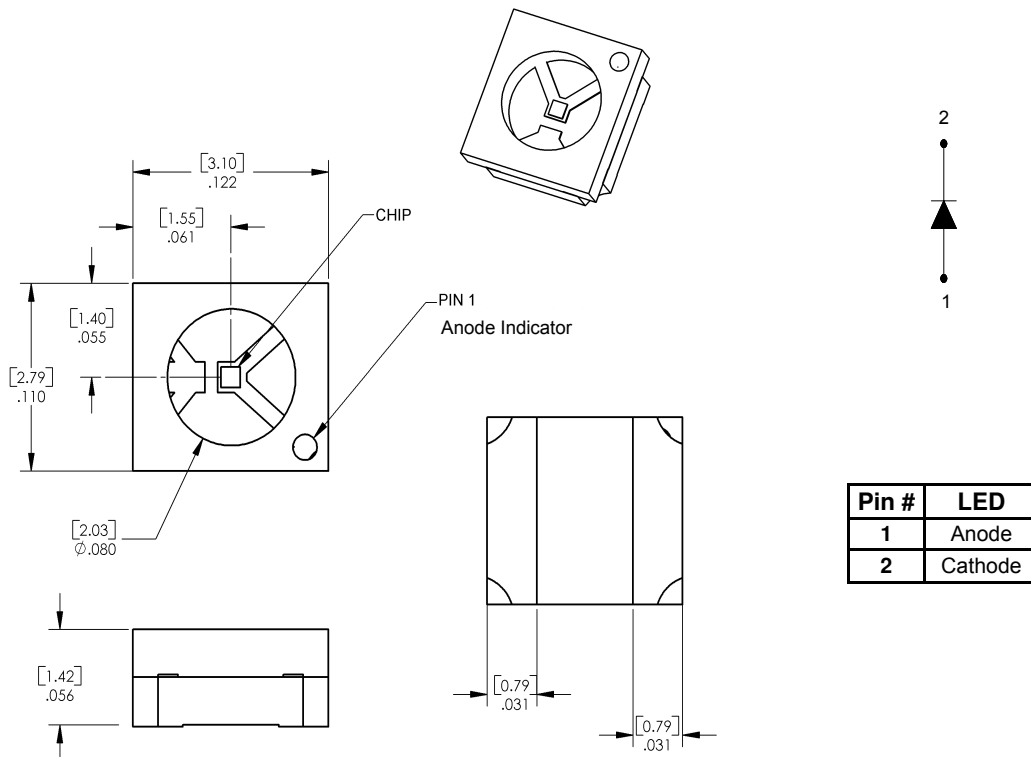
Description:

The **OPR2800** is a GaAIAs infrared LED mounted in a surface mount chip carrier (SMCC) package with a flat lens window that allows a wide beam angle. The SMCC format has a lower height profile than the PLCC-2 package and mounts in the same footprint. The device is suitable for use in single device or array applications. The OPR2800 is spectrally matched to the OPR5500 phototransistor.

Applications:

- Non-contact position sensing
- Machine automation
- Datum detection
- Optical encoding

Ordering Information			
Part Number	LED Peak Wavelength	Total Beam Angle	Packaging
OPR2800	880 nm	100°	Waffle Pack
OPR2800T			Tape & Reel



RoHS

OPTEK reserves the right to make changes at any time in order to improve design and to supply the best product possible.

Absolute Maximum Ratings ($T_A = 25^\circ\text{C}$ unless otherwise noted)

Storage Temperature Range	-40° C to +100° C
Operating Temperature Range	-40° C to +100° C
Reverse Voltage	30 V
Continuous Forward Current	50 mA
Solder reflow time within 5°C of peak temperature is 20 to 40 seconds ⁽¹⁾	250° C
Power Dissipation	130 mW ⁽²⁾

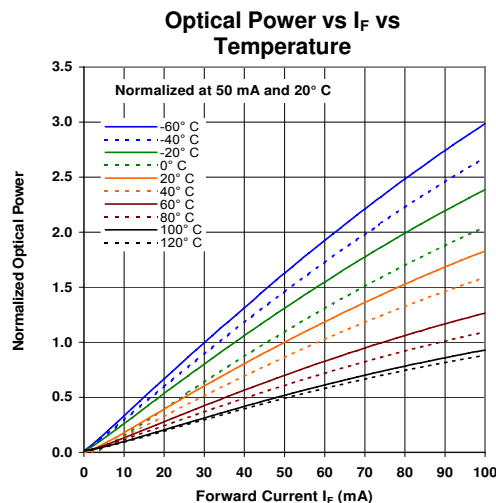
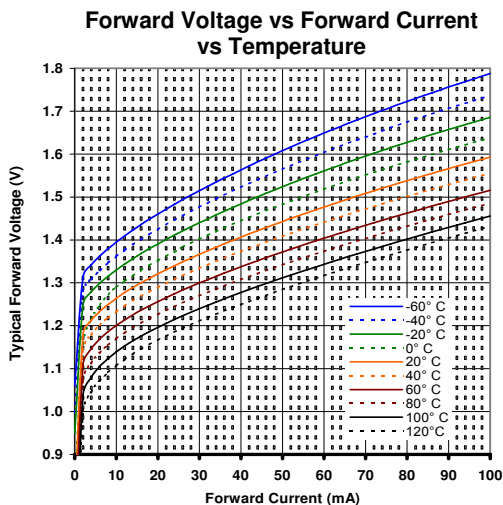
Electrical Characteristics ($T_A = 25^\circ\text{C}$ unless otherwise noted)

SYMBOL	PARAMETER	MIN	TYP	MAX	UNITS	TEST CONDITIONS
$E_{E(APT)}$	Apertured Radiant Incidence	0.2	-	-	mW/cm ²	$I_F = 20\text{ mA}$ ⁽³⁾
V_F	Forward Voltage	-	-	1.50	V	$I_F = 50\text{ mA}$
I_R	Reverse Current	-	-	100	μA	$V_R = 2.0\text{ V}$
λ_P	Wavelength at Peak Emission		890	-	nm	$I_F = 10\text{ mA}$
θ_{HP}	Emission Angle at Half Power Points	-	100	-	Degree	$I_F = 20\text{ mA}$
t_r	Output Rise Time, Output Fall Time	-	-	500	ns	$I_{F(PK)} = 100\text{ mA}$, $PW = 10\ \mu\text{s}$, D.C. = 10.0%
t_f	Output Rise Time, Output Fall Time	-	-	500	ps	

Notes:

- Solder time less than 5 seconds at temperature extreme.
- Derate linearly at 1.73 mW/° C above 25° C.
- $E_{E(APT)}$ is a measurement of the apertured radiant incidence upon a sensing area 0.081" (2.06 mm) in diameter, perpendicular to and centered on the mechanical axis of the lens and 0.590" (14.99 mm) from the measurement surface. $E_{E(APT)}$ is not necessarily uniform within the measured area.

OP2800



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