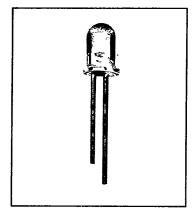
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Optoelectronics Division

TRW Electronic Components Group

Product Bulletin 5042 January 1985

GaAs Plastic Infrared Emitting Diodes Types OP160SL, OP160SLD, OP160SLC, OP160SLB, OP160SLA

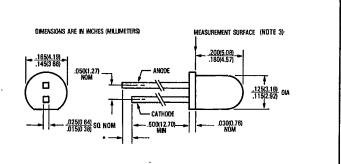


Features

- · Selected to specific on-line intensity ranges Low cost, miniature, plastic end-looking T-1 oackade
- Mechanically and spectrally matched to the OP500-OP500SL series phototransistors and the **OP530** photodarlington

Description

The OP160SL series devices are gallium arsenide infrared emitting diodes mounted in clear plastic end-looking packages. The OP160SL series allows a broad range of intensity selection. The narrow radiation pattern provides high on-axis intensity for excellent coupling efficiency with an OP500 or **OP500SL** series T-1 phototransistor. For additional information on spectral emission characteristics, please refer to the OP500 data sheet.



* FOR IDENTIFICATION PURPOSES, ANODE LEAD IS .060(1.52) NOM. LONGER THAN CATHODE LEAD.

Absolute Maximum Ratings (TA-25°C unless otherwise noted)

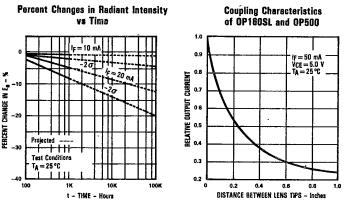
Reverse Voltage	2.0 V
Continuous Forward Current	
Peak Forward Current (Pulse Width = 1 µsec., 300 pps)	
Storage and Operating Temperature Range	-40°C to +100°C
Lead Soldering Temperature (1/16 inch (1.6 mm) from case for 5 sec. with soldering iron)	1)
Power Dissipation	
Notes:	

(1) RMA flux is recommended. Duration can be extended to 10 seconds max, when flow soldering.

(2) Derate linearly 1.33 mW/°C above 26°C.

(3) Eq(APT) is a measurement of the average 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. Ee(APT) is not necessarily uniform within the measured area.

Typical Performance Curves



Optoelectronics Division, TRW Electronic Components Group, 1216 W. Crosby Rd., Carrollton, TX 75006 (214) 323-2200, TLX 6716032 or 215849

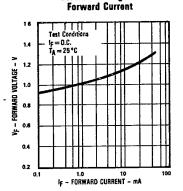
10

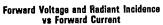
Types OP160SL, OP160SLD, OP160SLC, OP160SLB, OP160SLA

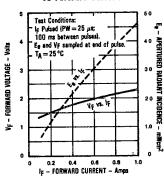
Symbol	Characteristics (TA = 25°C unless o Parameter		Min.	Тур.	Max.	Units	Test Conditions	
PO	Radiant Power Output	OP160	0.50			mW	IF=20 mA	
E _e {APT} ⁽³⁾	Apertured Radiant Incidence	OP160SL OP160SLD OP160SLC OP160SLB OP160SLA	0.05 0.28 0.85 1.40 1.95		0.95 1.60 2.2	mW/cm ² mW/cm ² mW/cm ²	F = 20 mA F = 20 mA	
VF	Forward Voltage				1.60	٧	IF == 20 mA	
	Reverse Current				100	μA	VR=2.0 V	

Typical Performance Curves

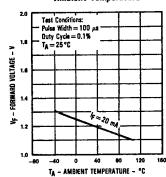
Forward Voltage vs







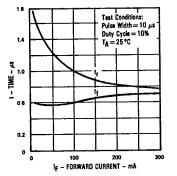
Forward Voltage vs Ambient Temperature



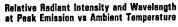
Relative Radiant Intensity vs

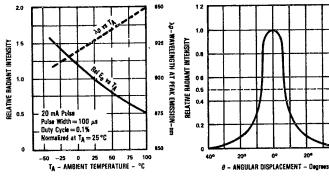
Angular Displacement

Rise Time and Fall Time vs Forward Current



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

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