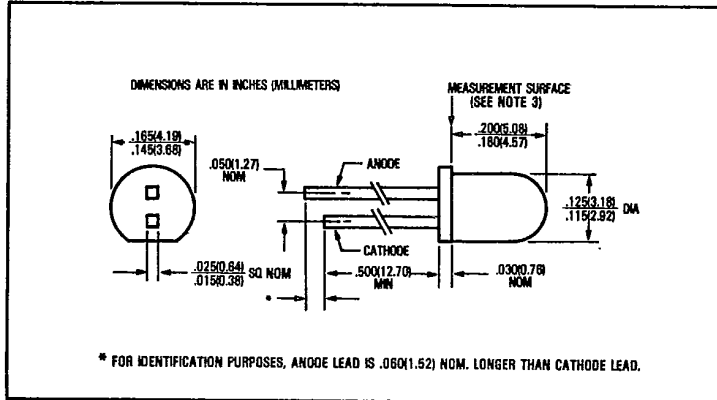
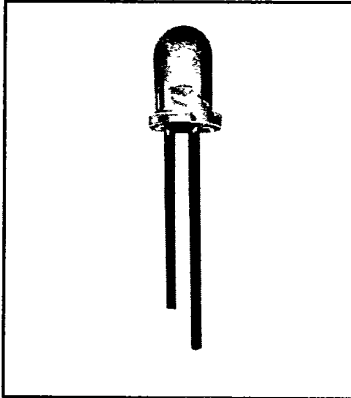


## GaAlAs Plastic Infrared Emitting Diodes

### Types OP260SL, OP260SLC, OP260SLB, OP260SLA



#### Features

- Up to 1.6 times the radiant intensity of the GaAs equivalent at the same drive current
- Selected to specific on-line intensity ranges
- Mechanically and spectrally matched to the OP500-OP500SL series of phototransistors and the OP630 photodarlington
- Narrow beam T-1 package for high coupling efficiency

#### Description

The OP260SL series are gallium aluminum arsenide infrared emitting diodes mounted in low cost, clear plastic end-looking packages. Gallium aluminum arsenide features a significant increase in the radiated output of gallium arsenide at the same forward current. Also, with a wavelength centered at 875 nanometers, it more closely matches the spectral response of silicon photosensors. For additional information on spectral emission characteristics, please refer to the OP500 data sheet.

#### Absolute Maximum Ratings (T<sub>A</sub> = 25°C unless otherwise noted)

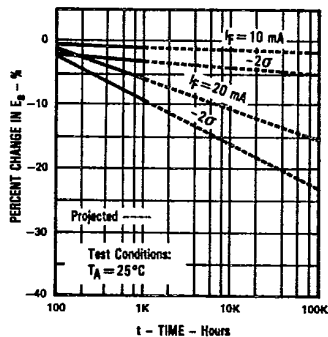
Reverse Voltage	2.0 V
Continuous Forward Current	50 mA
Peak Forward Current (Pulse Width = 1 μsec., 300 pps)	3.0 A
Storage and Operating Temperature	-40°C to +100°C
Lead Soldering Temperature (1/16 inch [1.6 mm] from case for 5 sec. with soldering iron) <sup>(1)</sup>	240°C
Power Dissipation	100 mW <sup>(2)</sup>

#### Notes:

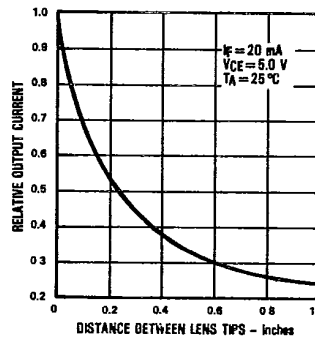
- (1) RMA flux is recommended. Duration can be extended to 10 seconds max. when flow soldering.
- (2) Derate linearly 1.33 mW/°C above 25°C.
- (3) E<sub>g</sub>(APT) is a measurement of the average apertured radiant incidence upon a sensing area 0.081" (2.06 mm) in diameter perpendicular to and centered on the mechanical axis of the lens, and 0.590" (14.99 mm) from the measurement surface. E<sub>g</sub>(APT) is not necessarily uniform within the measured area.

#### Typical Performance Curves

Percent Changes in Radiant Intensity vs Time



Coupling Characteristics of OP260SL and OP500



Types OP260SL, OP260SLC, OP260SLB, OP260SLA

T-41-13

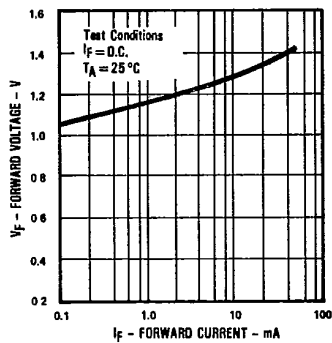
Electrical Characteristics (TA = 25°C unless otherwise noted)

Symbol	Parameter	Min.	Typ.	Max.	Units	Test Conditions
P <sub>O</sub>	Radiant Power Output	OP260	1.00		mW	I <sub>F</sub> = 20 mA
E <sub>e</sub> (APT) <sup>(3)</sup>	Apertured Radiant Incidence	OP260SL OP260SLC OP260SLB OP260SLA	.54 .54 1.65 2.7	3.3 4.7	mW/cm <sup>2</sup> mW/cm <sup>2</sup> mW/cm <sup>2</sup> mW/cm <sup>2</sup>	I <sub>F</sub> = 20 mA I <sub>F</sub> = 20 mA I <sub>F</sub> = 20 mA I <sub>F</sub> = 20 mA
V <sub>F</sub>	Forward Voltage			1.80	V	I <sub>F</sub> = 20 mA
I <sub>R</sub>	Reverse Current			100	μA	V <sub>R</sub> = 2.0 V

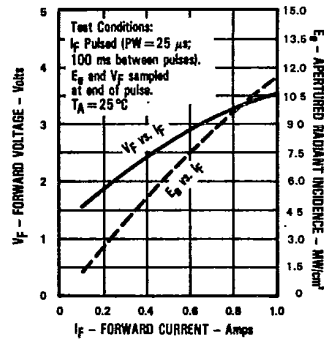


Typical Performance Curves

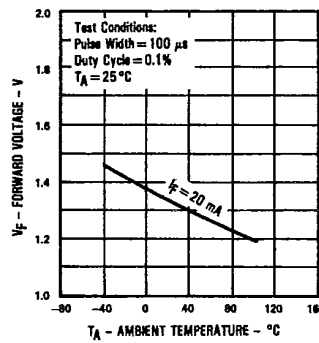
Forward Voltage vs Forward Current



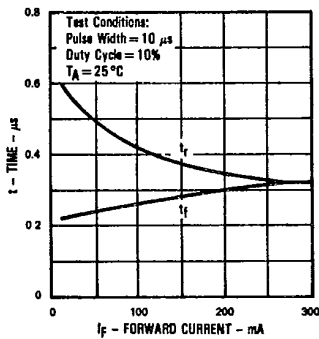
Forward Voltage and Radiant Incidence vs Forward Current



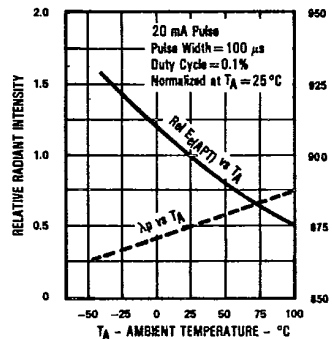
Forward Voltage vs Ambient Temperature



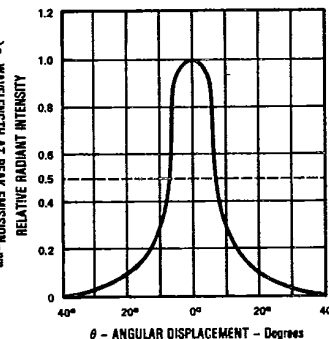
Rise Time and Fall Time vs Forward Current



Relative Radiant Intensity and Wavelength at Peak Emission vs Ambient Temperature



Relative Radiant Intensity vs Angular Displacement



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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