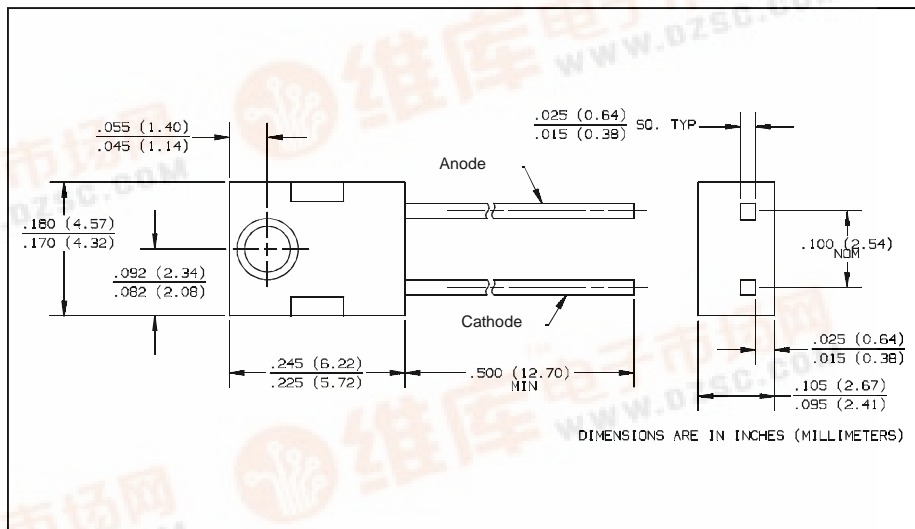


Plastic Point Source Infrared Emitting Diode

Type OP245PS



Features

- Point source irradiance pattern
- Wavelength matched to silicon's peak response
- Fast switching speed
- Side-looking package for space limited applications

Description

The OP245PS is an 850 nm, infrared emitting diode molded in IR transmissive amber-tinted epoxy packages. The side-looking package is for use in PC board mounted slotted switches or as easily mounted interrupt detectors.

The stable V_F vs. Temperature characteristic make them ideal for applications where voltage is limited (such as battery operation).

The low t_r/t_f make them ideal for high speed operations.

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

Reverse Voltage	2.0 V
Continuous Forward Current	50 mA
Peak Forward Current (2 μs pulse width, 0.1% duty cycle)	1.0 A
Storage and Operating Temperature Range	-40°C to $+100^\circ\text{C}$
Lead Soldering Temperature [1/16 inch (1.6mm) from case for 5 sec. with soldering iron]	260°C (1)
Power Dissipation	100 mW (2)

NOTES:

- (1) RMA flux is recommended. Duration can be extended to 10 seconds maximum when flow soldering. A maximum of 20 grams force may be applied to the leads when soldering.
- (2) Derate linearly 1.33 mW/ $^\circ\text{C}$ above 25°C .
- (3) $E_{e(\text{APT})}$ is a measurement of the average apertured radiant incidence upon a sensing area 0.180" (4.57 mm) in diameter, perpendicular to and centered on the mechanical axis of the lens, and 0.653" (16.6 mm) from the measurement surface. $E_{e(\text{APT})}$ is not necessarily uniform within the measured area.

Type OP245PS

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

SYMBOL	PARAMETER	MIN	TYP	MAX	UNITS	TEST CONDITIONS
E _e (APT)	Apertured Irradiance	.10		.90	mW/cm ²	I _F = 20 mA ⁽³⁾
V _F	Forward Voltage			1.80	V	I _F = 20 mA
I _R	Reverse Current			20	μA	V _R = 2 V
λ _p	Wavelength at Peak Emission		850		nm	I _F = 20 mA
B	Spectral Bandwidth Between Half Power Points		50		nm	I _F = 20 mA
θ _{HP}	Emission Angle at Half Power		±18°		Deg.	I _F = 20 mA
t _r	Rise Time		10		ns	I _{F(PK)} = 20 mA
t _f	Fall Time		10		ns	PW = 10 μs, D.C. = 10%

INFRARED
EMITTING
DIODES