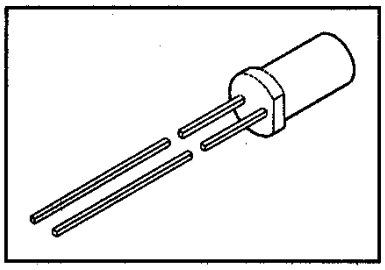
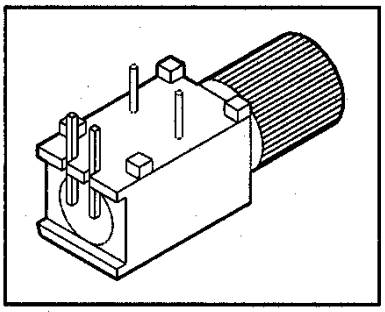
SFH250 Plastic Fiber Optic Photodiode Detector
SFH250V Plastic Connector Housing





Features
- 2.2 mm Aperture holds Standard 1000 Micron Plastic Fiber
- No Fiber Stripping Required
- Fast Switching Time
- Good Linearity
- Sensitive in visible and near IR Range
- Molded Microlens for Efficient Coupling

Plastic Connector Housing
- Mounting Screw Attached to the Connector
- Interference Free Transmission from light-Tight Housing
- Transmitter and Receiver can be flexibly positioned
- No Cross Talk
- Auto insertable and Wave solderable
- Supplied in Tubes

Applications
- Household Electronics
- Power Electronics
- Optical Networks
- Medical Instruments
- Automotive Electronics
- Light Barriers

Type	Ordering Code
SFH250	Q62702-P1012
SFH250V	Q62702-P0263

Absolute Maximum Ratings

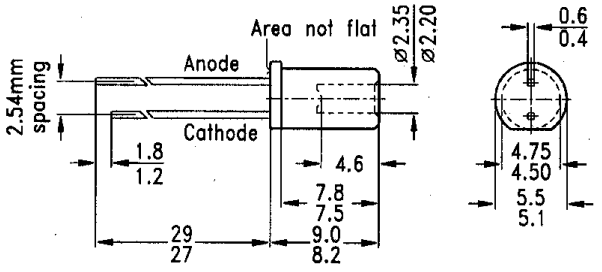
Parameter	Symbol	Value	Unit
Operating Temperature Range	T_{OP}	-40 to +85	°C
Storage Temperature Range	T_{STG}	-55 to +100	°C
Junction Temperature	T_J	100	°C
Soldering Temperature (2 mm from case bottom t≤5 s)	T_S	260	°C
Maximum Temperature Cycling Without electrical operation Temperature Range –55 to +100°C	n_{cycel}	200	
Reverse Voltage	V_R	30	V
Power Dissipation	P_{TOT}	100	mW
Thermal Resistance, Junction/Air	R_{thJA}	750	K/W

Characteristics (T_A = 25°C)

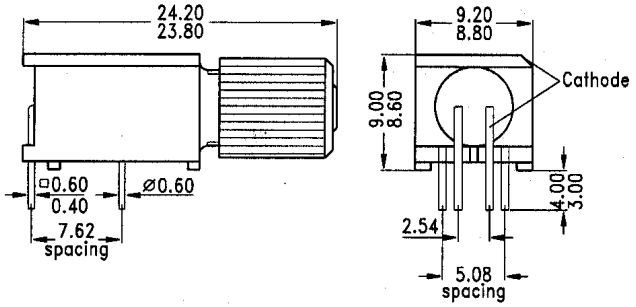
Parameter	Symbol	Value	Unit
Maximum Photosensitivity Wavelength	λ_{Smax}	850	nm
Photosensitivity Spectral Range (S=10% S_{max})	λ	400 to 1100	nm
Dark Current (V_R=20 V)	I_R	1 (≤ 10)	nA
Capacitance (f=1 MHz, V_R=0 V)	C_O	11	pF
Rise and Fall Times of Photo Current (R_L=50 Ω, V_R=30 V, λ=880 nm) 10% to 90% 90% to 10%	 t_R t_F	 0.01 0.01	 µs µs
Photo Current (Φ_{IN}=10 µW coupled from the End of a Plastic fiber, V_R=5 V) λ=660 nm λ=950 nm	 I_P I_P	 3 (≥ 1.6) 4 (≥ 2.5)	 µA µA
Forward Voltage (I_F=50 mA)		2.1 (≤ 2.8)	V
Temperature Coefficient I_P λ=560 to 660 nm	TC_I	-0.04	%/K
Temperature Coefficient I_P λ=830 nm	TC_I	0.04	%/K
Temperature Coefficient I_P λ=950 nm	TC_I	0.2	%/K

Package Outlines (dimensions in mm, unless otherwise specified)

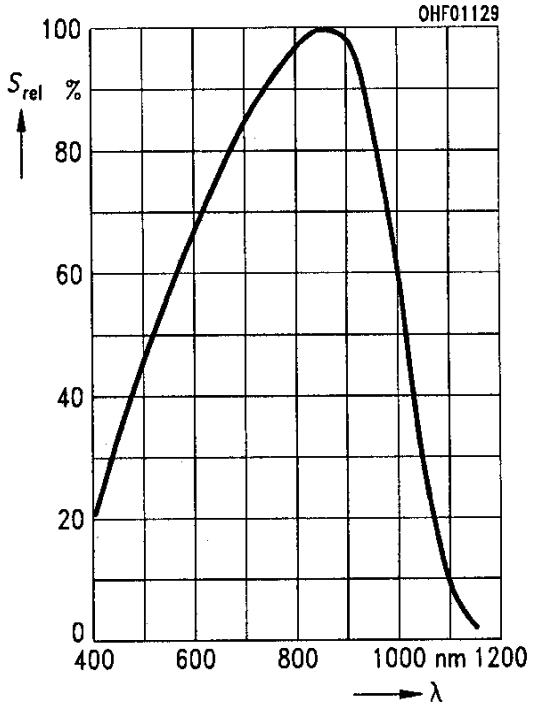
SFH250



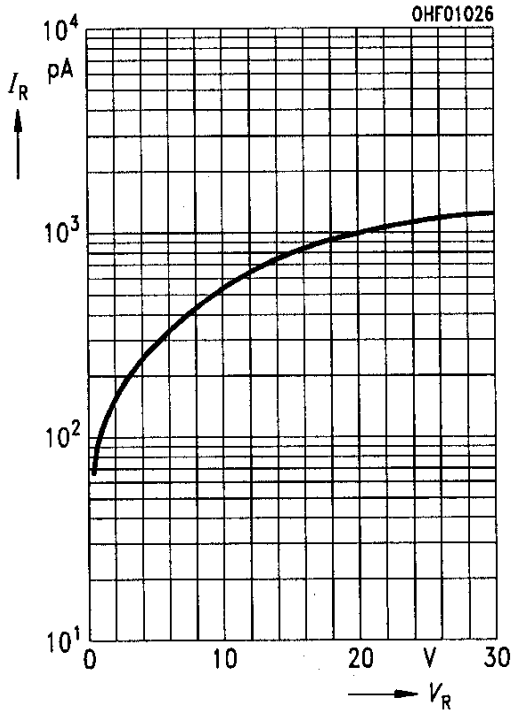
SFH250V



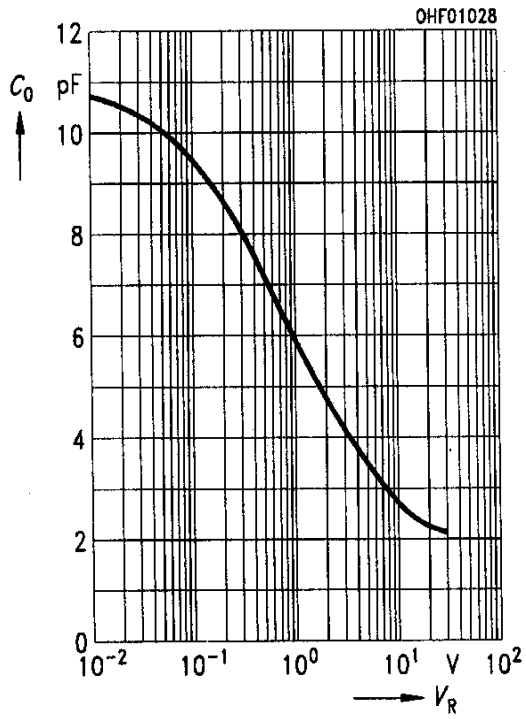
Relative spectral sensitivity $S_{rel} = f(\lambda)$



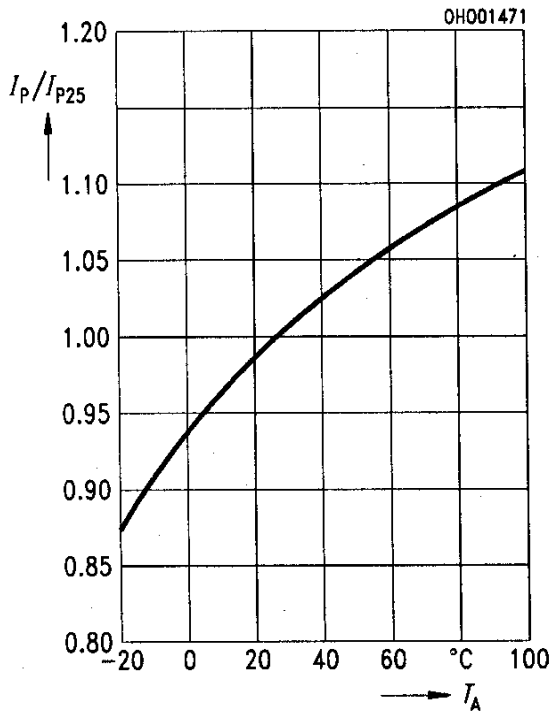
Dark current $I_R = f(V_R)$, T_A = 25 °C



Capacitance $C_0 = f(V_R)$, f = 1 MHz, E_V = 0



Photocurrent $I_P/I_{P25} = f(T_A)$, λ = 950 nm



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Infineon Technologies AG • Fiber Optics • Wernerwerkdamm 16 • Berlin D-13623, Germany

Infineon Technologies, Inc. • Fiber Optics • 1730 North First Street • San Jose, CA 95112, USA

Infineon Technologies K.K. • Fiber Optics • Takanawa Park Tower •
20-14, Higashi-Gotanda, 3-chome, Shinagawa-ku • Tokyo 141, Japan