



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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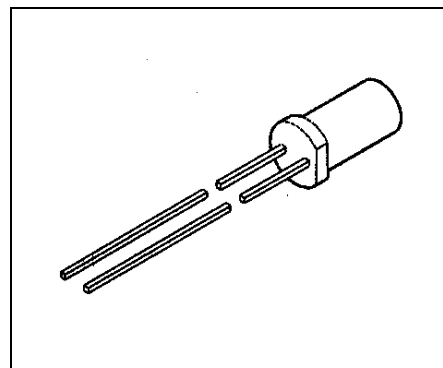


Plastic Fiber Optic Photodiode Detector Plastic Connector Housing

SFH250
SFH250V

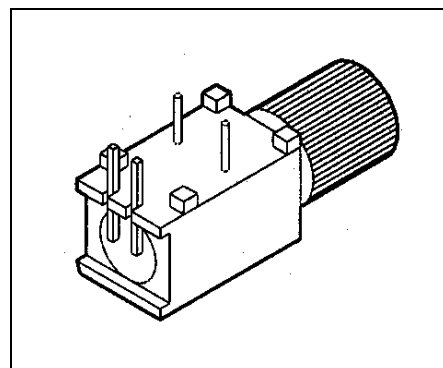
Features

- 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
- Light Barriers

Type	Ordering Code
SFH250	Q62702-P1012
SFH250V	Q62702-P0263

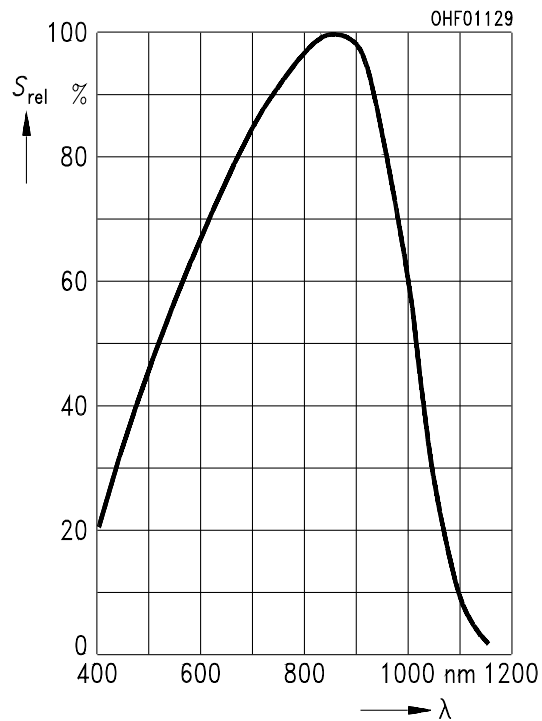
Technical Data
Absolute Maximum Ratings

Parameter	Symbol	Limit Values		Unit
		min.	max.	
Operating Temperature Range	T_{OP}	−40	+85	°C
Storage Temperature Range	T_{STG}	−40	+100	°C
Junction Temperature	T_J		100	°C
Soldering Temperature (2 mm from case bottom, $t \leq 5$ s)	T_S		260	°C
Reverse Voltage	V_R		30	V
Power Dissipation	P_{TOT}		100	mW
Thermal Resistance, Junction/Air	R_{thJA}		750	K/W

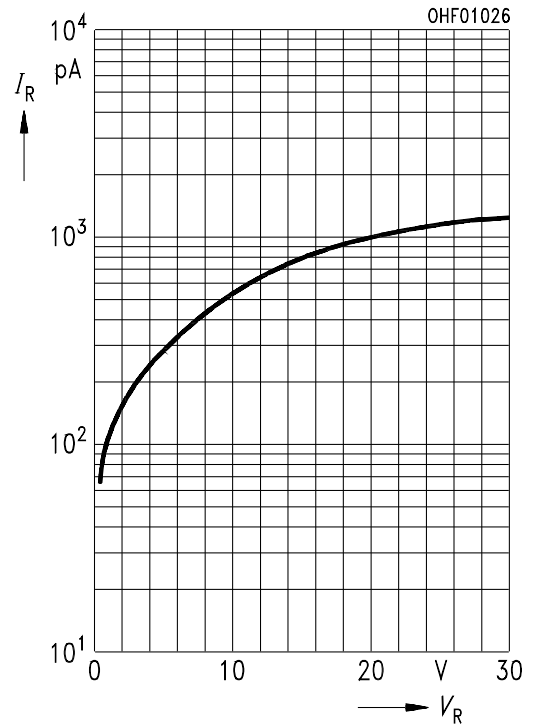
Characteristics ($T_A = 25^\circ\text{C}$)

Parameter	Symbol	Values			Unit
		min.	typ.	max.	
Maximum Photosensitivity Wavelength	$\lambda_{S\max}$		850		nm
Photosensitivity Spectral Range ($S = 10\% S_{\max}$)	λ	400		1100	nm
Dark Current ($V_R = 20\text{ V}$)	I_R		1 (≤ 10)		nA
Capacitance ($f = 1\text{ MHz}$, $V_R = 0\text{ V}$)	C_O		11		pF
Rise and Fall Times of Photo Current ($R_L = 50\ \Omega$, $V_R = 30\text{ V}$, $\lambda = 880\text{ nm}$) 10% to 90% 90% to 10%	t_R t_F		0.01 0.01		μs
Photo Current ($\Phi_{IN} = 10\ \mu\text{W}$ coupled from the end of a plastic fiber, $V_R = 5\text{ V}$) $\lambda = 660\text{ nm}$ $\lambda = 950\text{ nm}$	I_P		3 (≥ 1.6) 4 (≥ 2.5)		μA
Temperature Coefficient I_P $\lambda = 560\text{ to }660\text{ nm}$	TC_I		-0.04		% / K
Temperature Coefficient I_P $\lambda = 830\text{ nm}$			0.04		
Temperature Coefficient I_P $\lambda = 950\text{ nm}$			0.2		

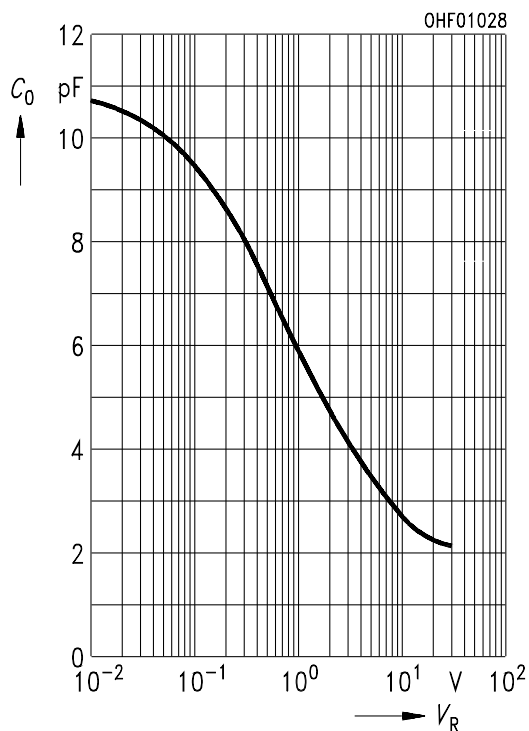
Relative Spectral Sensitivity $S_{rel} = f(\lambda)$



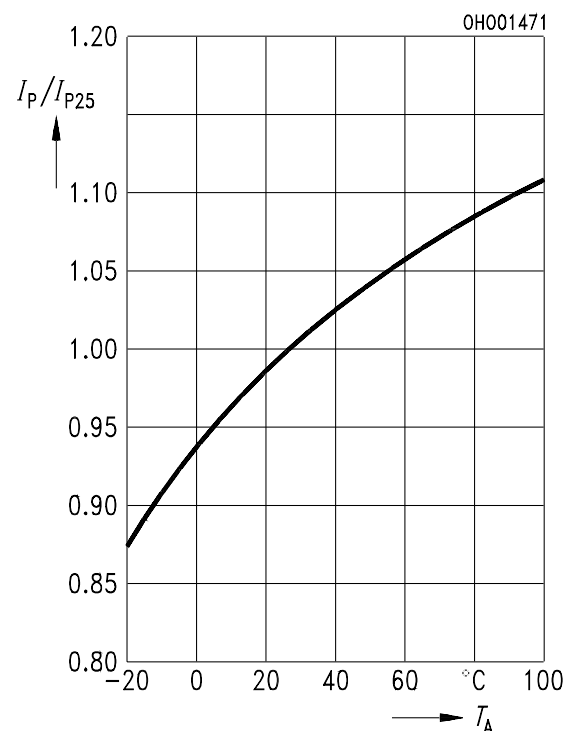
Dark Current $I_R = f(V_R), T_A = 25^\circ\text{C}$



Capacitance $C_0 = f(V_R), f = 1 \text{ MHz}, E_V = 0$



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



Package Outlines

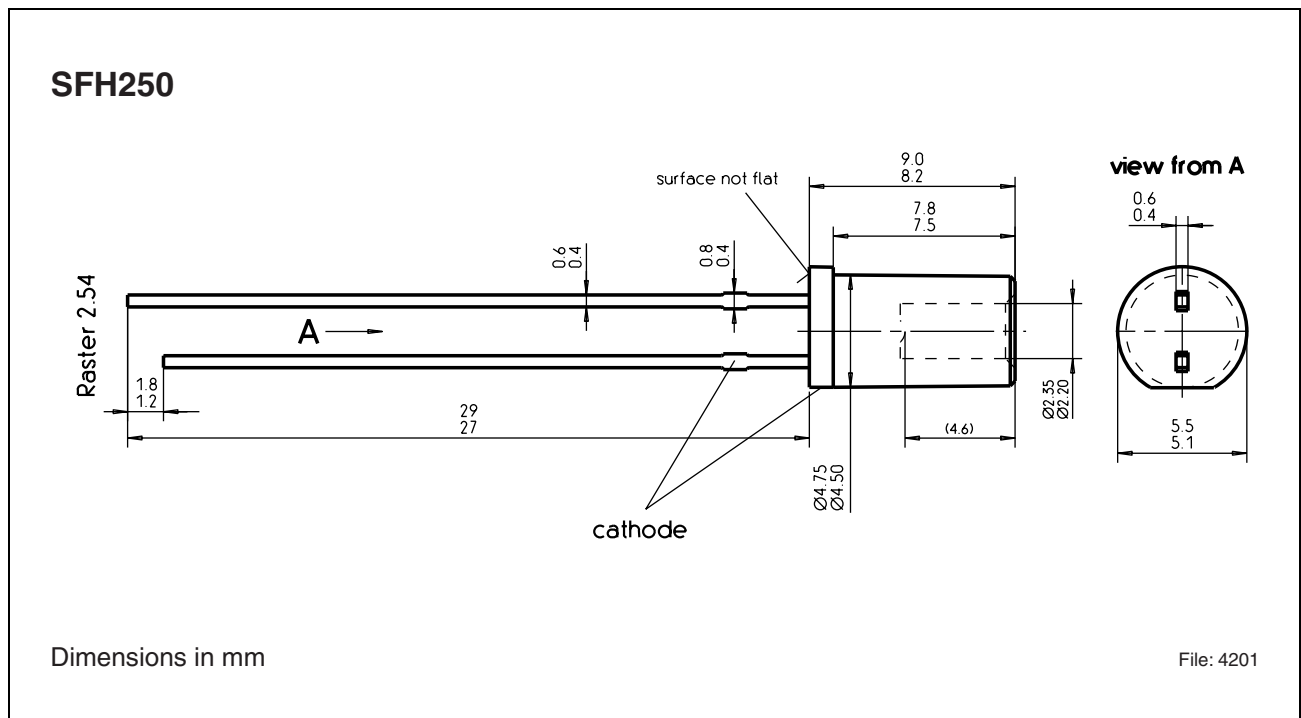


Figure 1

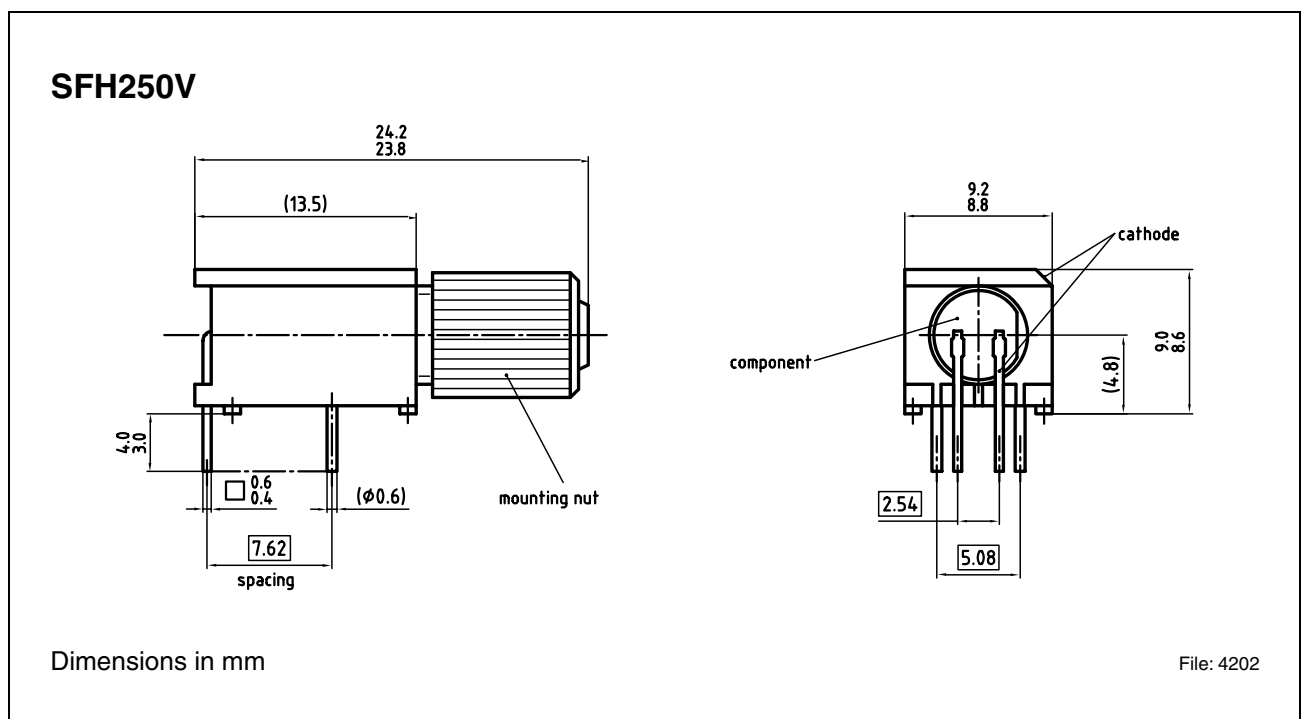


Figure 2

SFH250
SFH250V

Revision History:	2004-03-19	DS1
Previous Version:	2002-03-14	

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