

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!



Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

Email & Skype: info@chipsmall.com Web: www.chipsmall.com

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China









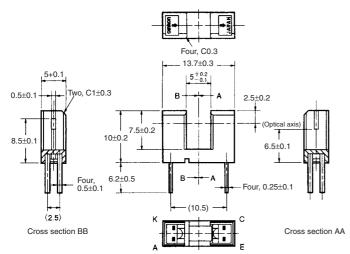
Photomicrosensor (Transmissive) **FF-SX1081**



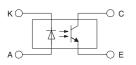
Be sure to read Precautions on page 25.

Dimensions

Note: All units are in millimeters unless otherwise indicated.



Internal Circuit



Terminal No.	al No. Name	
Α	Anode	
K	Cathode	
С	Collector	
F	Fmitter	

Unless otherwise specified, the tolerances are as shown below.

Dimensions	Tolerance	
3 mm max.	±0.3	
3 < mm ≤ 6	±0.375	
6 < mm ≤ 10	±0.45	
10 < mm ≤ 18	±0.55	
18 < mm ≤ 30	±0.65	

■ Features

- General-purpose model with a 5-mm-wide slot.
- PCB mounting type.
- High resolution with a 0.5-mm-wide aperture.

■ Absolute Maximum Ratings (Ta = 25°C)

	Item	Symbol	Rated value
Emitter	Forward current	I _F	50 mA (see note 1)
	Pulse forward cur- rent	I _{FP}	1 A (see note 2)
	Reverse voltage	V_R	4 V
Detector	Collector-Emitter voltage	V _{CEO}	30 V
	Emitter–Collector voltage	V _{ECO}	
	Collector current	I _C	20 mA
	Collector dissipa- tion	P _C	100 mW (see note 1)
Ambient tem-	Operating	Topr	–25°C to 85°C
perature	Storage	Tstg	–30°C to 100°C
Soldering temperature		Tsol	260°C (see note 3)

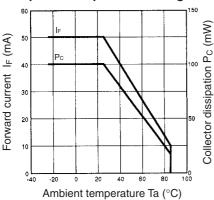
- Note: 1. Refer to the temperature rating chart if the ambient temperature exceeds 25°C.
 - 2. The pulse width is 10 μs maximum with a frequency of 100 Hz.
 - 3. Complete soldering within 10 seconds.

■ Electrical and Optical Characteristics (Ta = 25°C)

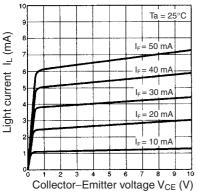
Item		Symbol	Value	Condition
Emitter	Forward voltage	V_{F}	1.2 V typ., 1.5 V max.	I _F = 30 mA
	Reverse current	I _R	0.01 μA typ., 10 μA max.	V _R = 4 V
	Peak emission wavelength	λ_{P}	940 nm typ.	I _F = 20 mA
Detector	Light current	I _L	0.5 mA min., 14 mA max.	I _F = 20 mA, V _{CE} = 10 V
	Dark current	I _D	2 nA typ., 200 nA max.	V _{CE} = 10 V, 0 ℓx
	Leakage current	I _{LEAK}		
	Collector–Emitter saturated voltage	V _{CE} (sat)	0.1 V typ., 0.4 V max.	I _F = 20 mA, I _L = 0.1 mA
	Peak spectral sensitivity wave- length	λ_{P}	850 nm typ.	V _{CE} = 10 V
Rising time	·	tr	4 μs typ.	$V_{CC} = 5 \text{ V}, R_L = 100 \Omega, I_L = 5 \text{ mA}$
Falling time		tf	4 μs typ.	$V_{CC} = 5 \text{ V}, R_L = 100 \Omega, I_L = 5 \text{ mA}$

■ Engineering Data

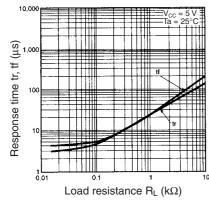
Forward Current vs. Collector Dissipation Temperature Rating



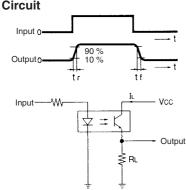
Light Current vs. Collector–Emitter Voltage Characteristics (Typical)



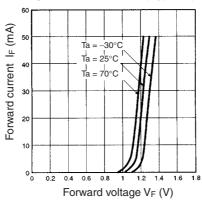
Response Time vs. Load Resistance Characteristics (Typical)



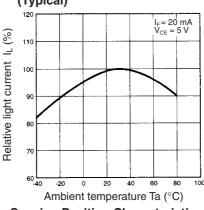
Response Time Measurement



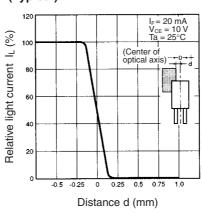
Forward Current vs. Forward Voltage Characteristics (Typical)



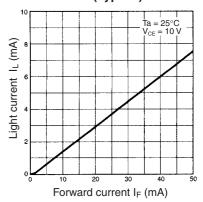
Relative Light Current vs. Ambient Temperature Characteristics (Typical)



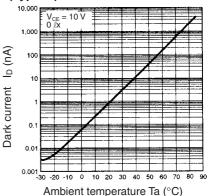
Sensing Position Characteristics (Typical)



Light Current vs. Forward Current Characteristics (Typical)



Dark Current vs. Ambient Temperature Characteristics (Typical)



Sensing Position Characteristics (Typical)

