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

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

Marktech Optoelectronics

Infrared Light Photo Reflector

Product No: **MTRS9520**

Peak Emission Wavelength: 950nm

The 950nm reflective sensor consists of a 950nm infrared emitter and high sensitivity photo transistor in the same package. The black molded housing reduces the effect of external ambient light. Custom emitter/detectors are available.

FEATURES

> High Reliability
> Compact (Φ4.0)
> Short Detection Distance Optimum 0.5-1.5mm

APPLICATIONS

> Card Reader
> Bar-code Reader
> Edge Sensing / Money-bill Reader

Absolute Maximum Ratings (Ta=25°C)

ITEMS	SYMBOL	RATINGS	UNIT
Forward Current (LED)	IF	60	mA
Pulse Forward Current (LED)*1	IFP	1	A
Reverse Voltage (LED)	VR	5	V
Power Dissipation (LED)	PD	100	mW
Collector-Emitter Voltage (PT)	Vce	20	V
Emitter-Collector Voltage (PT)	Vec	5	V
Collector Current (PT)	Ic	50	mA
Collector Power Dissipation (PT)	PC	75	mW
Total Power Dissipation	Ptot	100	mW
Operating Temperature Range	Topr	-20 ~ +80	°C

*1: Tw=10μsec, T=10msec.

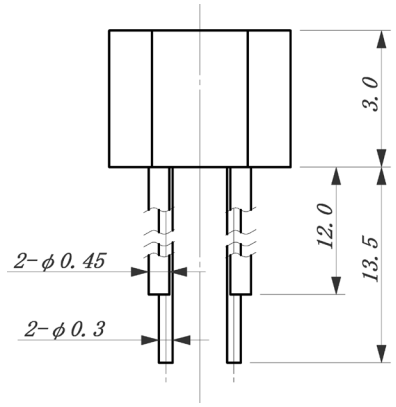
Electrical & Optical Characteristics (Ta = 25°C)

ITEMS	SYMBOL	CONDITIONS	MIN	TYP	MAX	UNIT
Forward Voltage	VF	IF=4mA	--	1.1	1.4	V
Reverse Current	IR	VR=5V	--	--	10	μA
Peak Emission Wavelength	λp	IF=4mA	--	950	--	nm
Spectral Line Half Width	Δλ	IF=4mA	--	50	--	nm
Dark Current (Iceo)	ID	Vce=10V	--	--	100	nA
Output Current	Io	IF=4mA, Vce=10V, d=1mm *	30	100	--	μA
Cross-talk Current	Ix	IF=4mA, Vce=10V	--	--	1.0	nA
Rise Time (10 to 90%)	Tr	Vcc=5V, Io=0.1mA, RL=1KΩ	--	20	--	μS
Fall Time (10 to 90%)	Tf	Vcc=5V, Io=0.1mA, RL=1KΩ	--	30	--	μS
Lead Soldering Temperature*2	Tls	--	--	--	260	°C

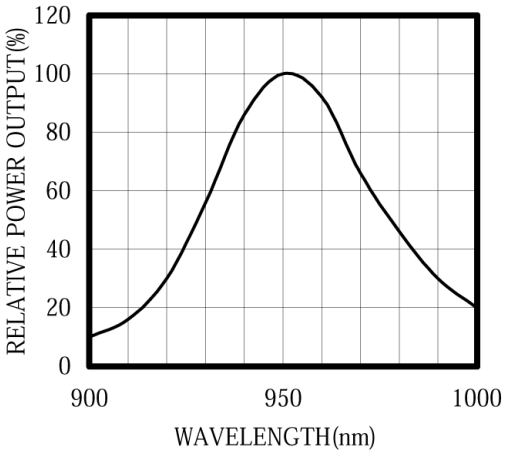
*1: Measured by reflecting with Aluminum evaporated mirror (d=1.00mm). *2: Time 5 Sec max, Position: Up to 3mm from the body.

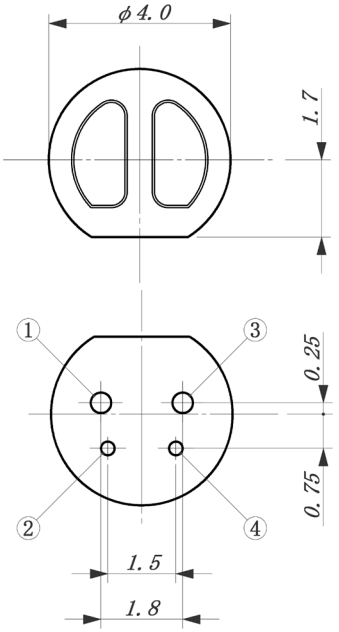
2011-08-11

Global Headquarters, 3 Northway Lane North, Latham, NY 12110, USA **www.marktechopto.com**
TOLL FREE: 1-800-984-5337 • **PHONE:** 518-956-2980 • **FAX:** 518-785-4725 • **EMAIL:** info@marktechopto.com

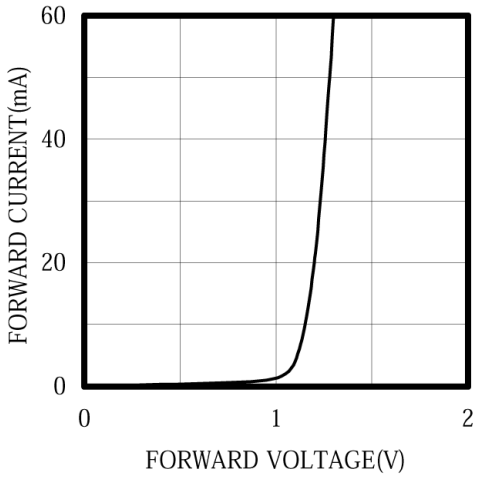


SPECTRAL OUTPUT





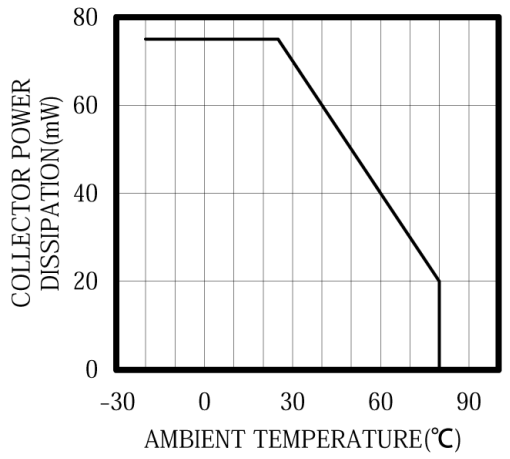
FORWARD I-V CHARACTERISTICS



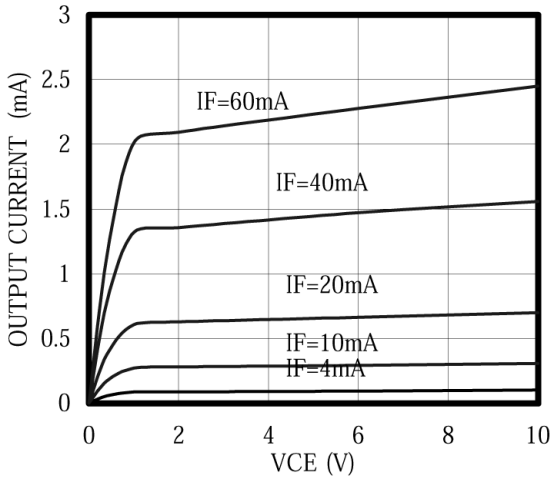
Unit: mm, Tolerance: ±0.2

2011-08-11

THERMAL DERATING CURVE

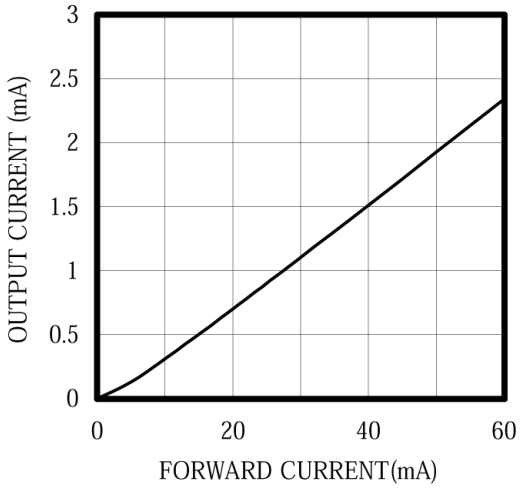


Io vs VCE

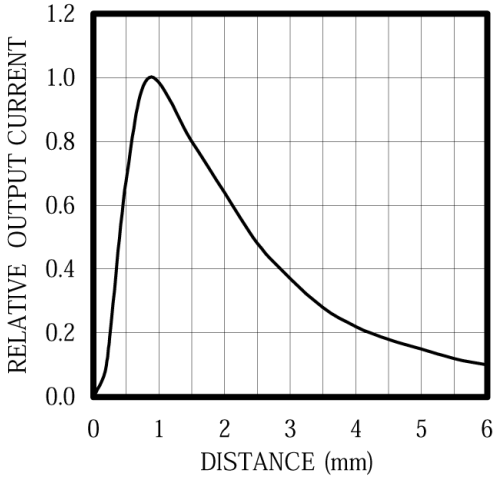


IF VS Io

VCE=10V



Io VS DISTANCE



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