深圳成光兴光电技术股份有限公司

SHENZHEN CGX OPTOELECTRONIC TECHNOLOGY , INC.

样 品 规 格 承 认 书

SAMPLE APPROVAL SHEET

客 户 名 称

Company Name ： _____

产 品 型 號

Part Number： CPD-75A1C

送 樣 日 期

Sample Date： _____

APPROVED SIGNATURES（供应商确认）		
核准	品保	工程

客户确认：□样品承认 □不予承认需重新送样 □不予承认不需送样

客户建议：_____

_____

APPROVED SIGNATURES（客户确认）		
核准	工程	品保

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SIDE LOOK PHOTO DIODE

PART NO. ： CPD-75A1C

Description

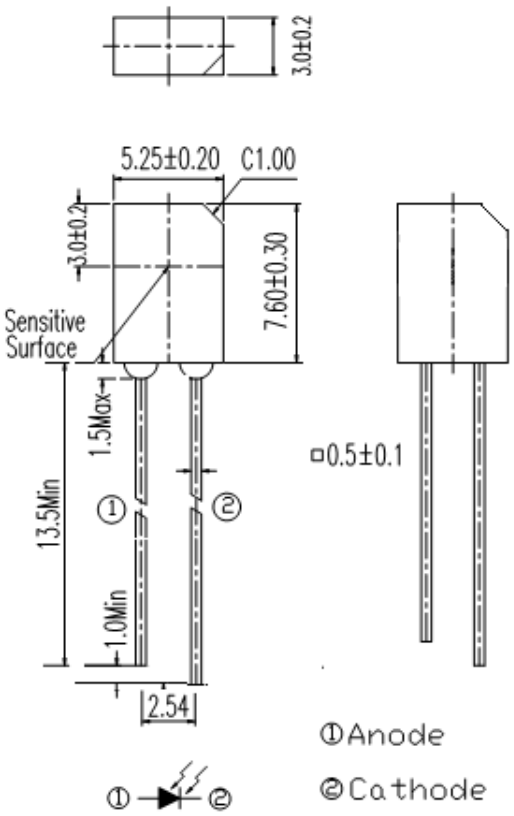
The CPD-75A1C is a photodiode mounted in special dark plastic package and suitable for the IRED 940nm) Type.

Features

- High photo sensitivity
- Low junction capacitance
- High cut -off frequency
- Fast switching time

Package Dimensions

Unit: mm



Notes :
1. Tolerance is ± 0.25 mm unless otherwise noted.
2. Protruded resin under flange is 1.0 mm max.
3. Lead spacing is measured where the leads emerge from the package.

Absolute Maximum Ratings

@ T_A=25℃

Parameter	Maximum Rating	Unit
Power Dissipation	150	mW
Operating Temperature Range	-25℃ to +85 ℃	
Storage Temperature Range	-40℃ to +100℃	
Lead Soldering Temperature	260℃ for 5 seconds	

SIDE LOOK PHOTO DIODE PART NO. ： CPD-75A1C

Optical-Electrical Characteristics

@ T_A=25℃

Parameter	Test Conditions	Symbol	Min.	Typ.	Max.	Unit
Reverse Break Down Voltage	I_R=0.1mA Ee=0	$V_{(BR)R}$	30	-----	-----	V
Reverse Dark Current	V_R=10V Ee=0	I_D	-----	-----	30	nA
Open Circuit Voltage	λp= 940nm Ee=0.1mW/cm^2	V_{OC}	-----	350	-----	mV
Rise Time	V_R =10V λp=940nm R_L=1KΩ	Tr	-----	50	-----	nsec
Fall Time		Tf	-----	50	-----	
Light Current	V_R =5V, λp=940nm Ee= 1mW/cm^2	I_L	8	18	-----	uA
Total Capacitance	V_R =3V, f=1MHz Ee=0	C_T	-----	25	-----	pF

Typical Optical-Electrical Characteristic Curves

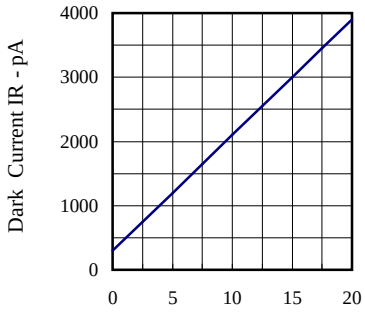


FIG.1 DARK CURRENT VS REVERSE VOLTAGE
TAMB=25-℃, Ee=0 mW/cm^2

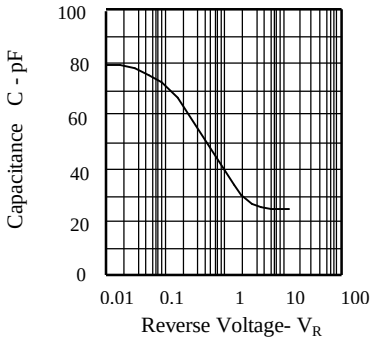


FIG.2 CAPACITANCE VS. REVERSE VOLTAGE
F=1MHz ; Ee=0mW/cm^2

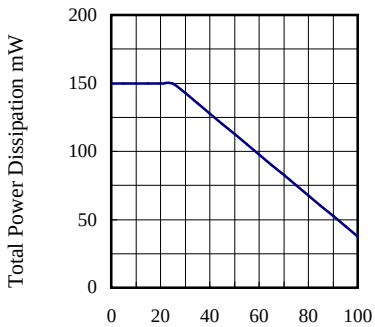


FIG.3 TOTAL POWER DISSIPATION
VS. AMBIENT TEMPERATURE

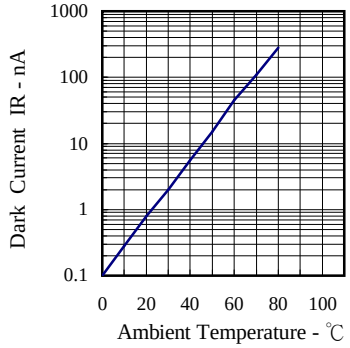


FIG.4 DARK CURRENT VS AMBIENT TEMPERATURE
V_R=10V, Ee=0 mw/cm^2

SIDE LOOK PHOTO DIODE **PART NO. :** CPD-75A1C

Typical Optical-Electrical Characteristic Curves

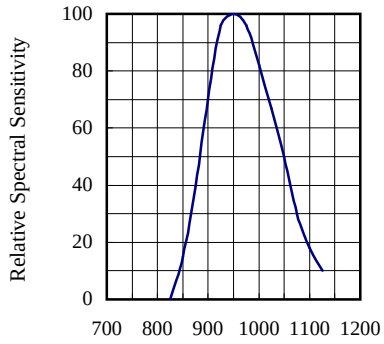


FIG.5 RELATIVE SPECTRAL SENSITIVITY VS. WAVELENGTH

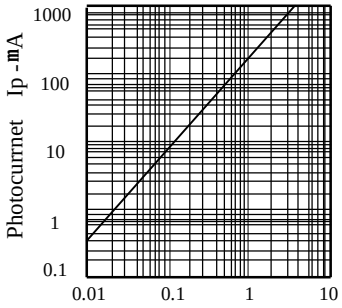


FIG.6 PHOTOCURRENT VS. IRRADIANCE = 850 nm

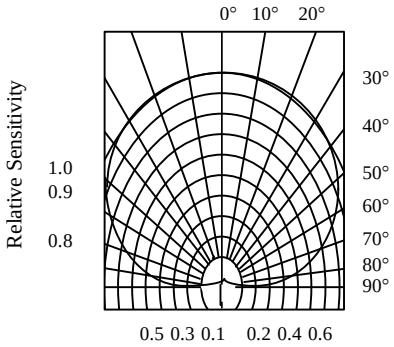


FIG.7 SENSITIVITY DIAGRAM

Reliability test items and test conditions

The reliability of products shall be satisfied with items listed below.
Confidence level：90%
LTPD (group of permitted defect rate): 10%

No.	Item	Test Conditions	Test Hours/ Cycles	Sample Sizes	Ac/Re	Reference Standard
1	REFLOW Soldering	Temp. : 260℃±5℃	5secs	22PCS	0/1	JEITA ED-4701 300 302
2	Temperature Cycle	H : +100℃ 15min ～5 min L : -40℃ 15min	100Cycles	22PCS	0/1	JEITA ED-4701 100 305
3	Thermal Shock	H : +100℃ 5min ～ 10 sec L : -10℃ 5min	100Cycles	22PCS	0/1	MIL-STD-202G
4	High Temperature Storage	Temp. : 100℃	1000Hrs	22PCS	0/1	JEITA ED-4701 200 201
5	Low Temperature Storage	Temp. : -40℃	1000Hrs	22PCS	0/1	JEITA ED-4701 200 202
6	DC Operating Life	IF = 50 mA	1000Hrs	22PCS	0/1	Tested with CGX standard
7	High Temperature/ High Humidity	85℃/RH85%	1000Hrs	22PCS	0/1	JEITA ED-4701 100 103

Notes： Failure Judgement Criteria：IR≥U×2 Ie≤L×0.8 VF≥U×1.2

U：Upper Specification Limit L：Lower Specification Limit