



ZOS-T1302-02-F(ZD)

Optical Sensor black

Transistor Output

Descriptions

The ZOS-T1302-02-F(ZD) is a phototransistor high-performance standard type, combines high-output GaAlAs IRED with high sensitive phototransistor.

Features

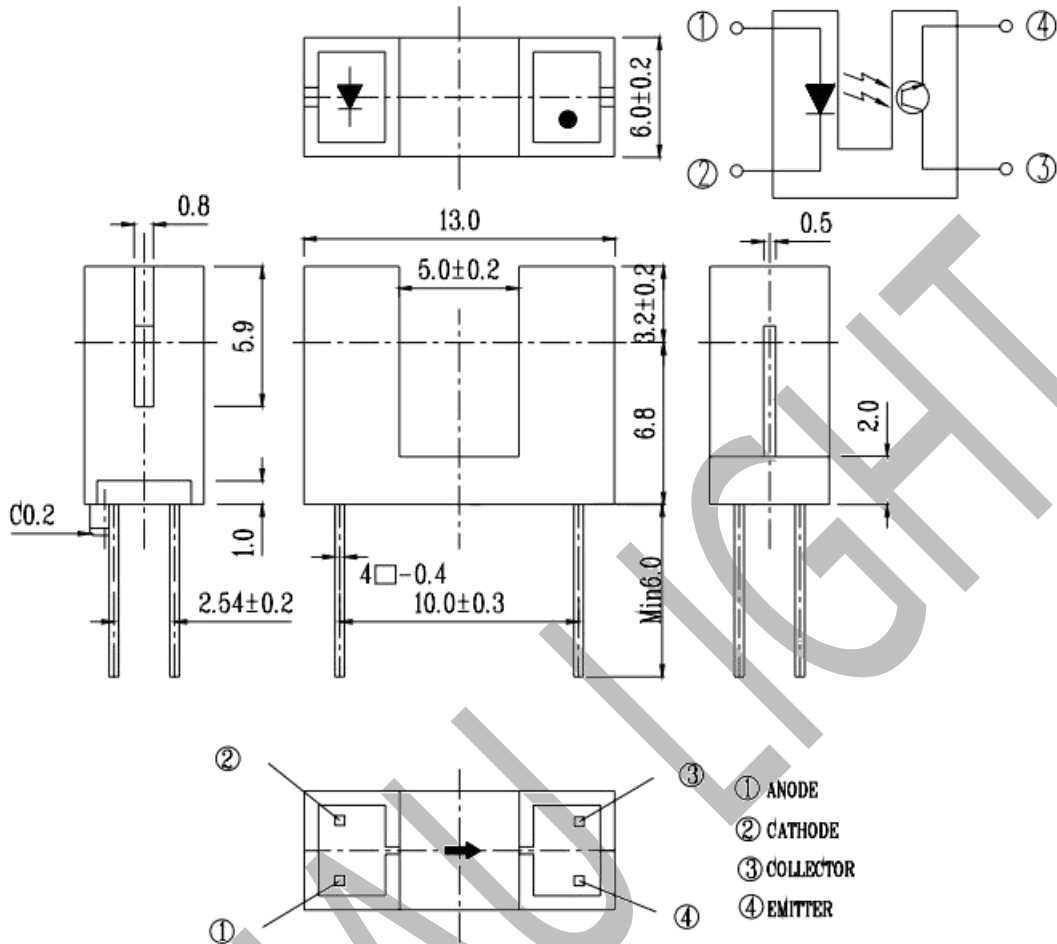
- Fast response time
- High analytic
- Cut-off visible wavelength $\lambda_p=940\text{nm}$
- High sensitivity
- Pb free
- This product itself will remain within RoHS compliant version

Applications

- Printers
- Switch Scanner
- Floppy disk driver
- Non-contact Switching
- For Direct Board



Package Dimension



Notes:

1. All dimensions are in millimeters.
2. Tolerances unless dimensions ± 0.3 mm.
3. Lead spacing is measured where the lead emerge from the package.



Absolute Maximum Ratings(Ta=25°C)

Parameter (Ta=25°C)		Symbo	Ratings	Unit
Input (Emitter)	Power Dissipation at(or Below)25°C Free Air Temperature	Pd	75	mW
	Reverse Voltage	V _R	5	V
	Forward Current	I _F	50	mA
	Peak Forward Current*1 (Pulse width≤100μs, Duty cycle=1%)	I _{FP}	1	A
Output (Detector)	Collector Power Dissipation	Pd	75	mW
	Collector Current	I _C	20	mA
	Collector-Emitter Voltage	V _{CEO}	30	V
	Emitter-Collector Voltage	V _{ECO}	5	V
Operating Temperature		T _{OPR}	-25~+85	°C
Storage Temperature		T _{STG}	-40~+100	°C
Lead Soldering Temperature *2mm from body for 5 seconds)		T _{SOL}	260	°C

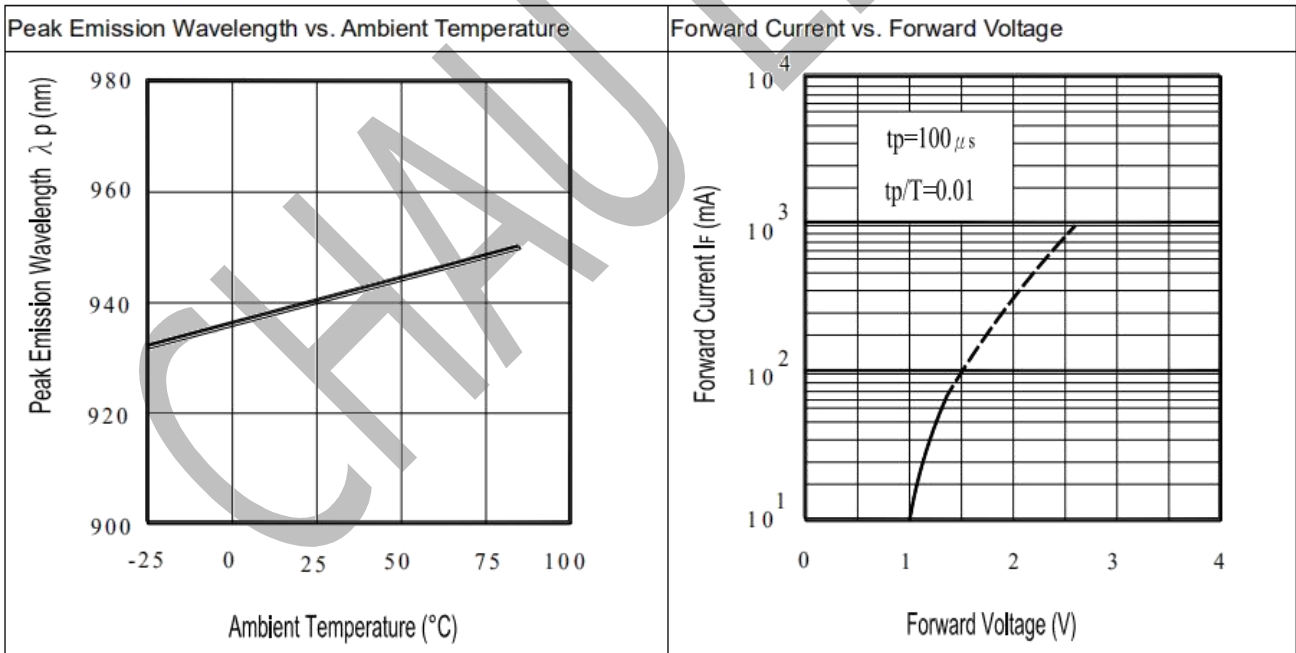
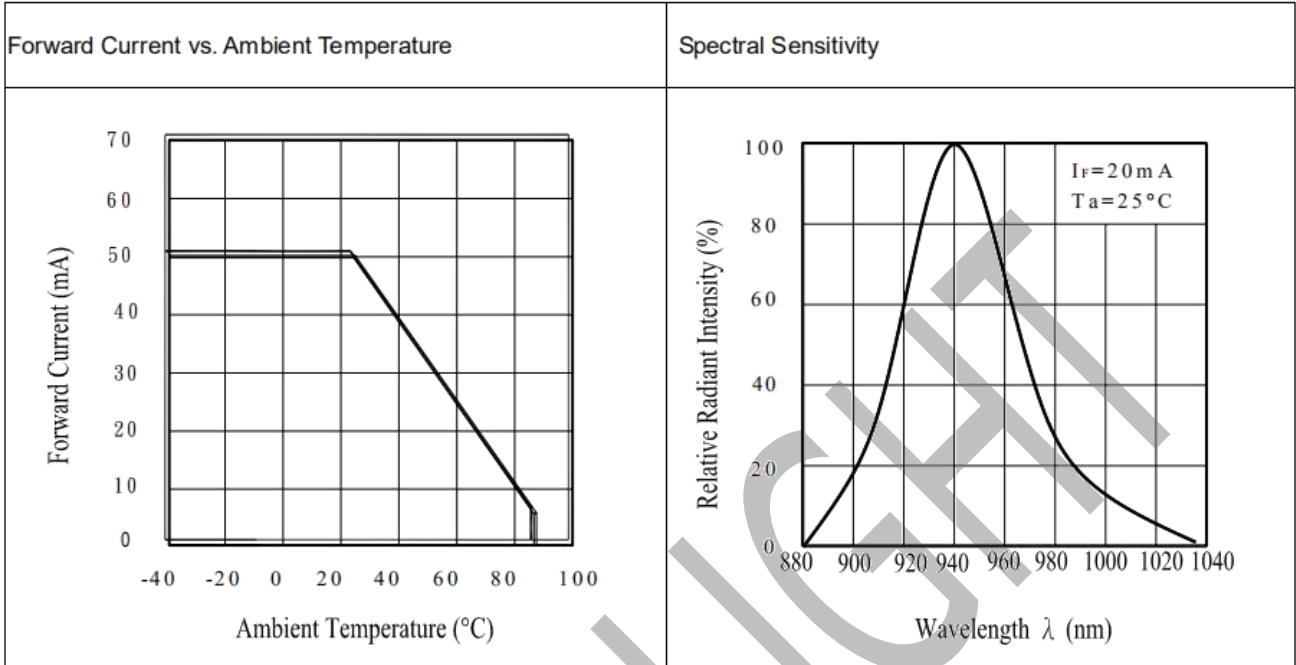
(*1) $t_w=100 \mu\text{sec.}$, $T=10 \text{ msec.}$ (*2) $t=5 \text{ Sec}$

Electro-Optical Characteristics (Ta=25°C)

Parameter (Ta=25°C)		Symbo	Min.	Typ.	Max.	Unit	Conditions
Input (Emitter)	Forward Voltage	V _F	--	1.2	1.5	V	I _F =20mA
	Reverse Current	I _R	--	--	10	μA	V _R =5V
	Peak Wavelength	λ _p	--	940	--	nm	I _F =20mA
Output (Detector)	Dark Current	I _{CEO}	--	--	100	nA	V _{CE} =20V, E _e =0mW/cm ²
	C-E Saturation Voltage	V _{CE(sat)}	--	--	0.4	V	I _C =2mA, E _e =1mW/cm ²
Transfer Characteristics	Collect Current	I _{C(ON)}	0.5	--	--	mA	V _{CE} =5V, I _F =20mA
	Rise time	t _r	--	15	--	μS	V _{CE} =5V, I _C =1mA, R _L =1KΩ
	Fall time	t _f	--	15	--	μS	V _{CE} =5V, I _C =1mA, R _L =1KΩ

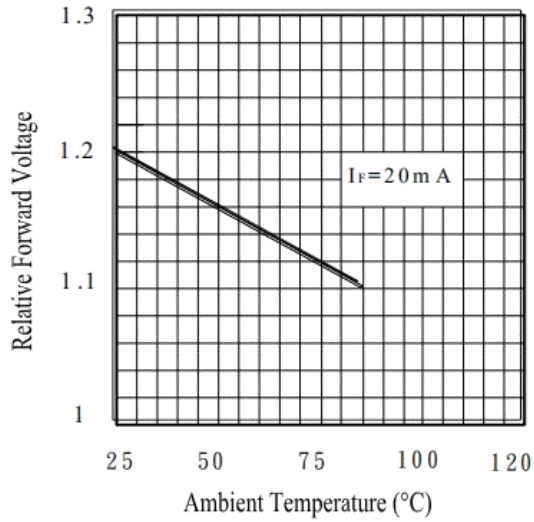


Typical Electrical/Optical/Characteristics Curves for IR

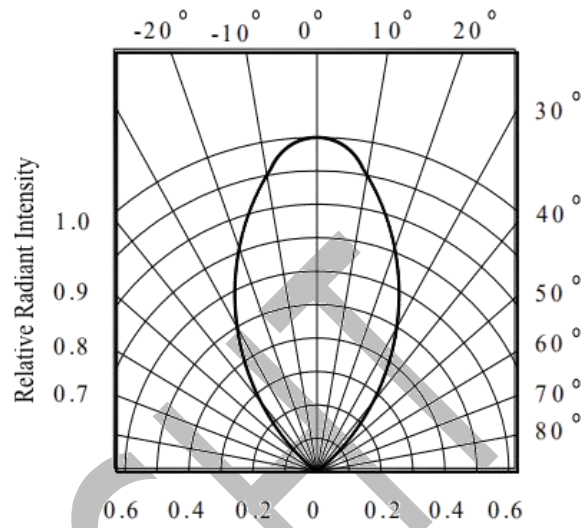




Forward Current Voltage vs. Ambient Temperature

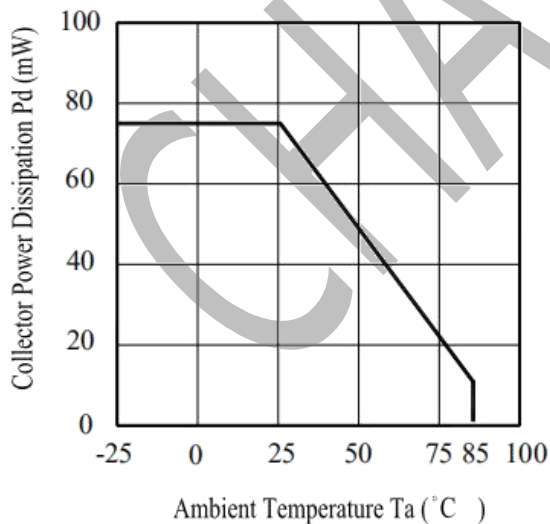


Relative Radiant Intensity vs. Angular Displacement

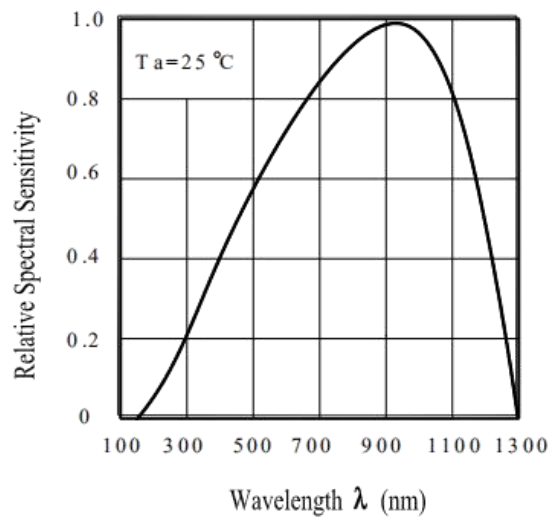


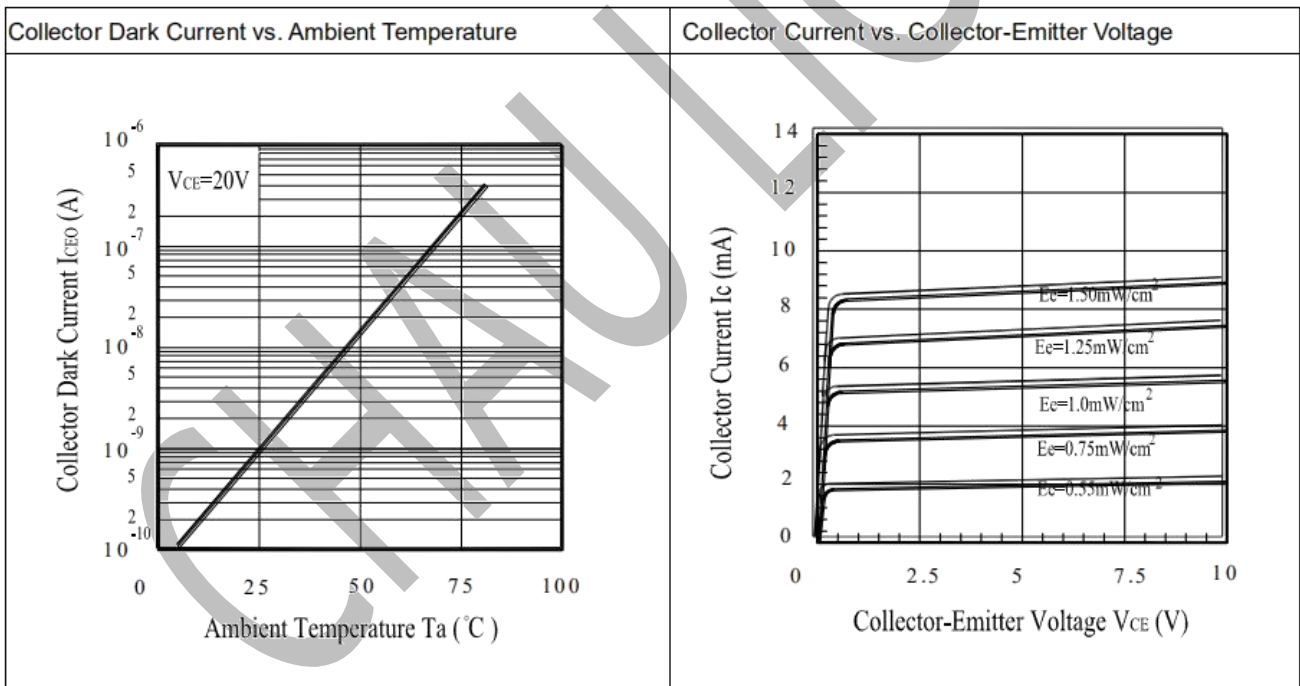
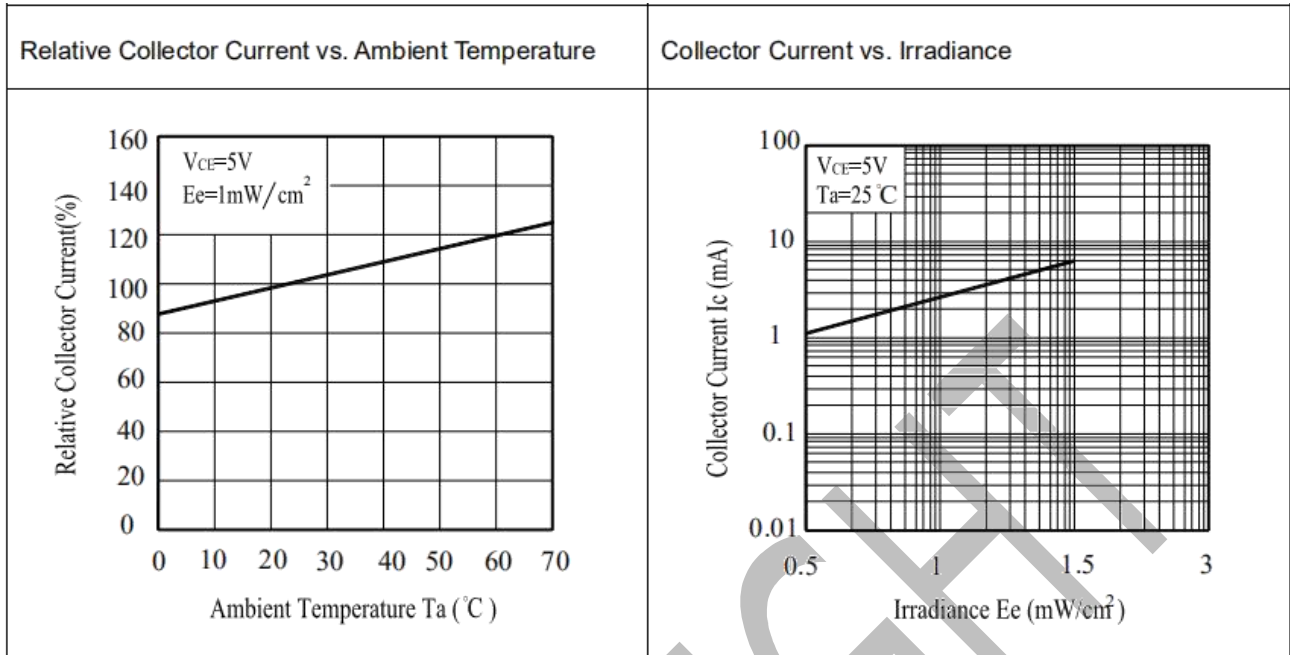
Typical Electrical/Optical/Characteristics Curves for PT

Collector Power Dissipation vs. Ambient Temperature



Spectral Sensitivity





Packing Quantity Specification

- 1.150PCS//1Bag
- 2.4Bag/1box
- 2. 10bos/1Carton

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