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DATA SHEET

PART NO. :PA-ITRLT0502

REV : A/0

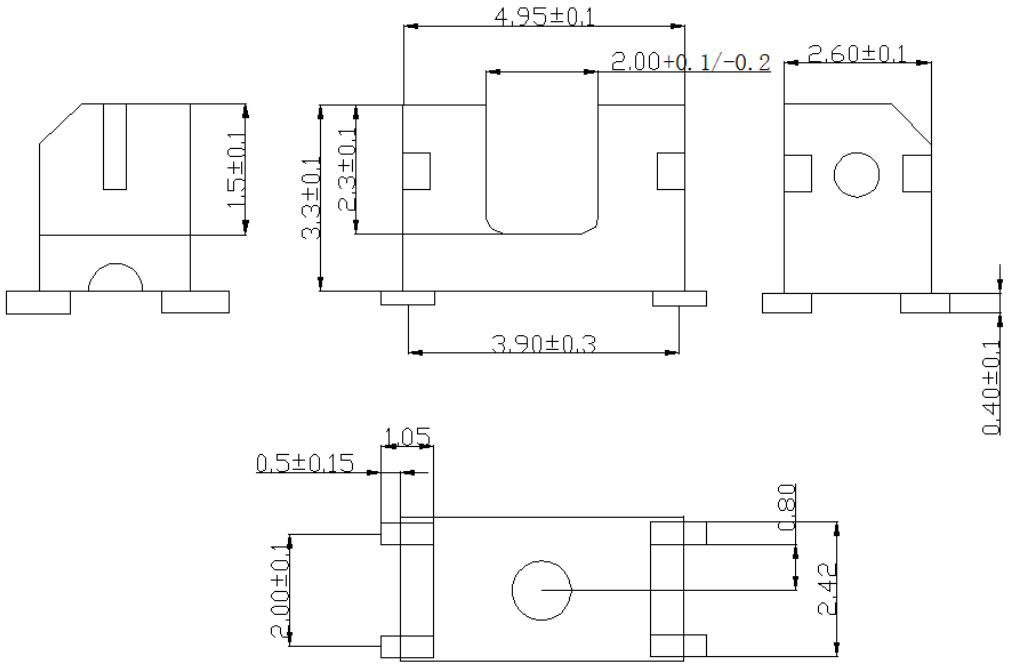
CUSTOMER'S APPROVAL : _____ DCC : _____

PARA ight	**Infrared LED**	
	Part No.:PA-ITRLT0502	REV: A/0

Features

- High reliability
- High radiant intensity
- Cut-off visible wavelength λp=940nm
- Low forward voltage
- Pb.Free、RoHS compliant version

Package Dimension



NOTES:

1.All dimensions are in millimeters.
2.Tolerance is ±0.30mm unless otherwise specified.
3.Specifications are subject to change without notice.

Absolute Maximum Ratings

Parameter（Ta=25℃）		Symbol	Ratings	Unit
Input Emitter	Power Dissipation *1	Pd	75	mW
	Reverse Voltage	V_R	5	V
	Forward Current	I_F	50	mA
	Peak Forward Current *2	I_{FP}	1	A
Output Detector	Power Dissipation *1	Pd	75	mW
	Collector-Emitter Voltage	V_{CEO}	35	V
	Emitter-Collector Voltage	V_{ECO}	5	V
	Collector Current	$I_{C(ON)}$	20	mA
Operating Temperature		Topr	-25~+85	℃
Storage Temperature		Tstg	-40~+85	℃
Lead Soldering Temperature*3		Tsol	260	℃

1、Below 25 Free Air Temperature
2、Pulse width≦100μs,Duty cycle= 1%
3、3mm form body for 5 seconds

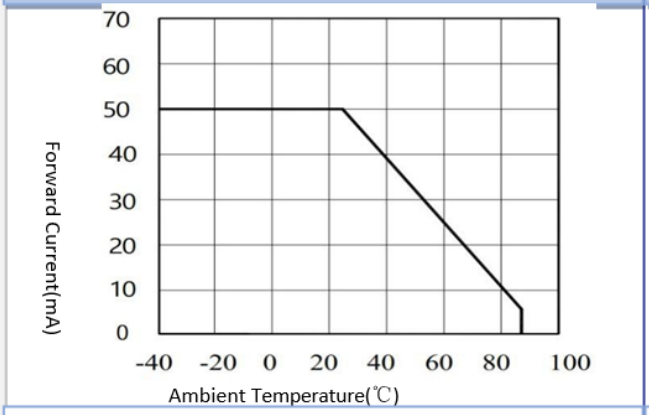
Electrical and optical characteristics(Ta=25℃)

Paramete（Ta=25℃）		Symbol	Condition	Min.	Typ.	Max.	Units
Input	Forward Voltage	V_F	I_F=20mA	--	1.2	1.5	V
			IF=100mA*2	--	1.4	1.85	
			IF=1A *2	--	2.6	4.0	
	Peak Wavelength	λp	I_F=20mA	--	940	--	nm
	Reverse Current	I_R	V_R=5V	--	--	10	μA
Output	Dark Current	I_{CEO}	Ee=0mW/cm^2 V_{CE}=20V	--	--	100	nA
	C-E Saturation Voltage	$V_{CE(SAT)}$	I_C=2mA Ee=1mW/cm^2	--	--	0.4	V
Transfer Characteristics	Rise Time	t_r	V_{CE}=5V I_C=1mA R_L=1000Ω	--	15	--	μS
	Fall Time	t_f		--	15	--	
	Collector Current	$I_{C(ON)}$	IF=10mA V_{CE}=5V	0.18	0.8	1.6	mA

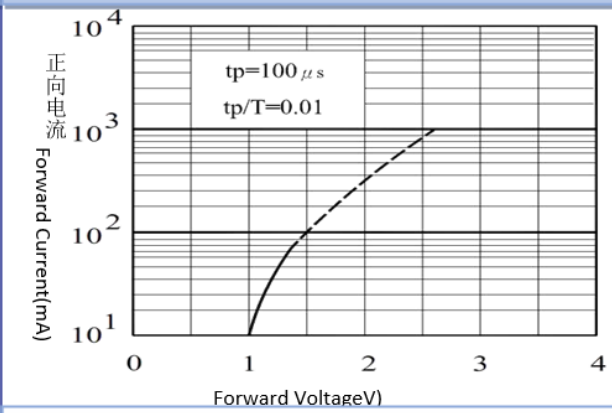
Pulse width≦100μs,Duty cycle= 1%

Typical Electro-Optical Characteristics Curves-IR :

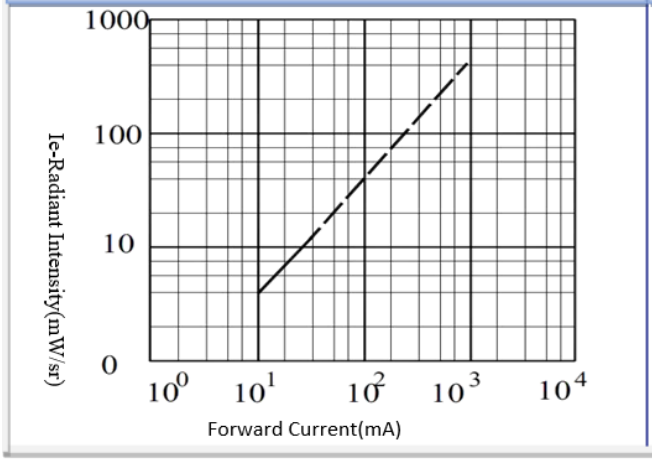
Forward Current vs. Ambient Temperature



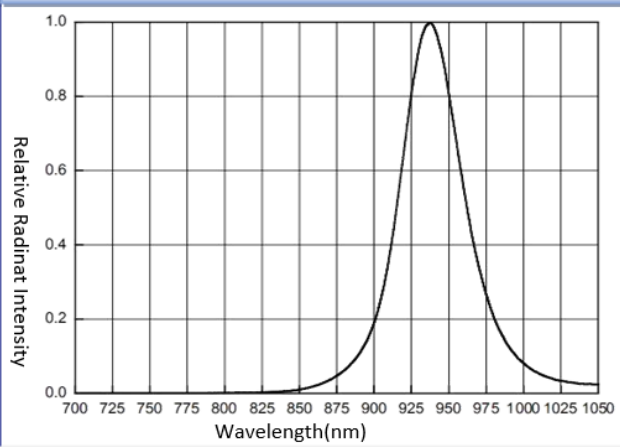
Forward Current vs. Forward Voltage



Radiant Intensity vs. Forward Current



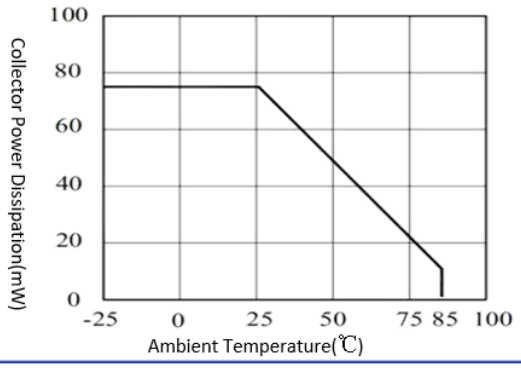
Spectral Distribution



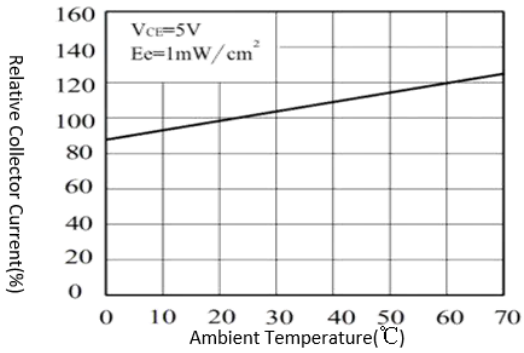
PARA ight	Infrared LED	
	Part No.:PA-ITRLT0502	REV: A/0

Typical Electro-Optical Characteristics Curves-PT

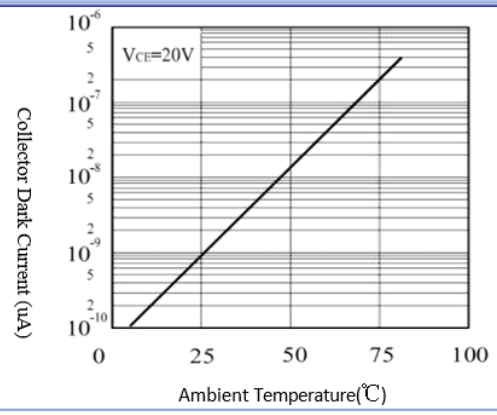
Collector Power Dissipation vs. Ambient Temperature



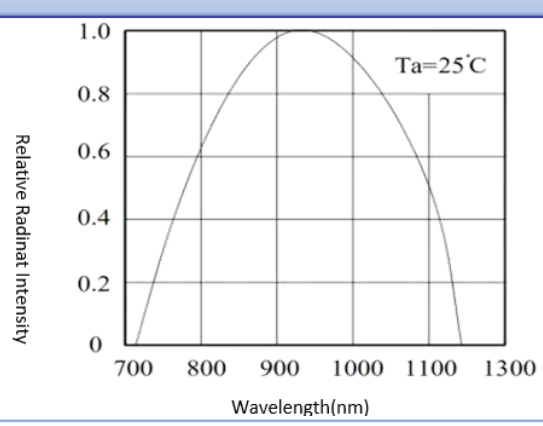
Relative Collector Current vs. Ambient Temperature



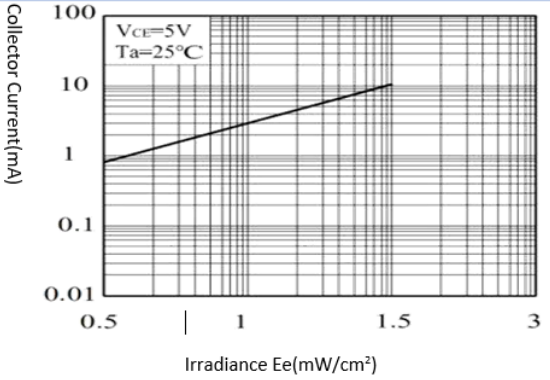
Collector Dark Current vs. Ambient Temperature



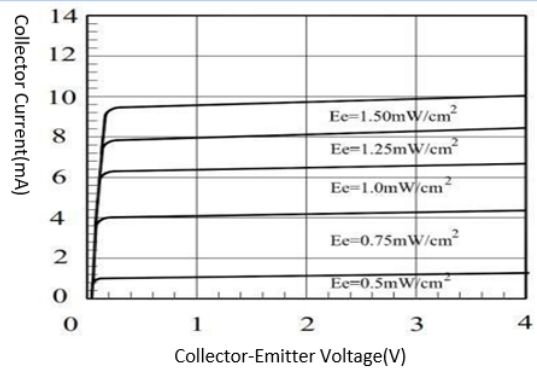
Spectral Sensitivity



Collector Current vs. Irradiance

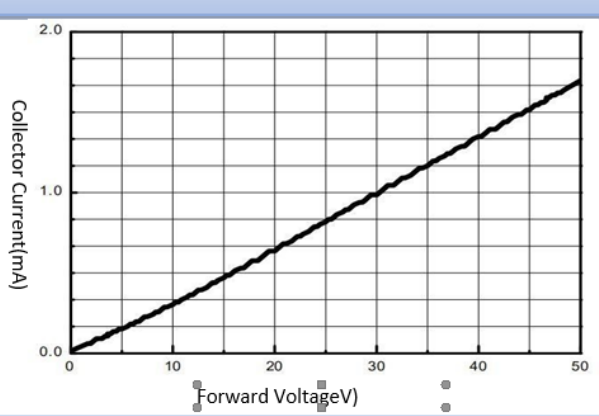


Collector Current vs. Collector-Emitter Voltage

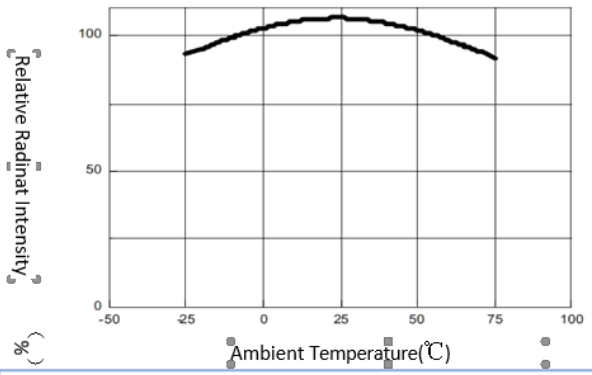


Typical Electro-Optical Characteristics Curves-ITR

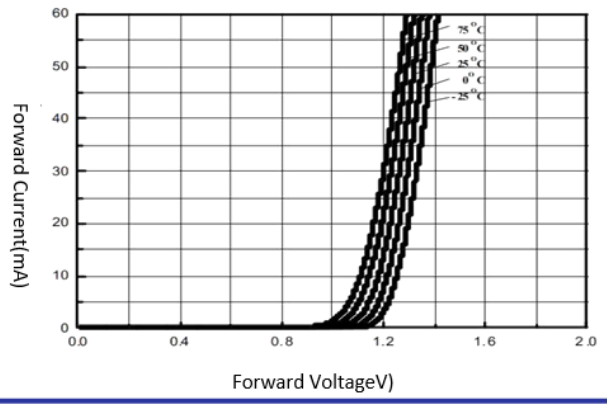
Collector Current vs. Forward Voltage



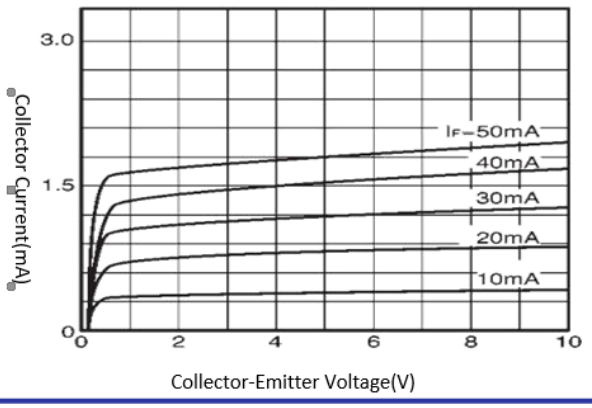
Relative Output vs. Ambient Temperature



Forward Current vs. Forward Voltage



Output Characteristics



Soldering Condition

1.Recommended welding conditions

Hand Soldering		DIPSoldering	
Weldingtemperature	300°C Max. (30W Max.)	Preheat temp.	100°C Max. (60 sec Max.)
Welding time	3 sec Max.	Bath temp. & time	260 Max., 5 sec Max
Distance	3mm Min.(From solder joint to epoxy bulb)	Distance	3mm Min. (From solder joint to epoxy bulb)

2.Avoid applying any stress to the lead frame, when the optical interruptor is at high temperature, especially during welding

3.Impregnation and manual welding shall not be performed more than once

4.After welding the breaker, the epoxy bulb shall be protected from mechanical shock or vibration until the breaker is restored to room temperature

5.A fast speed process is not recommended to cool the optical distractor from the peak temperature.

8.Although the recommended welding conditions are specified in the table above, the diaphragm jammer needs to be tilted or manually welded at the lowest temperature.

7.Wding parameters must be set and maintained according to recommended temperature and wave residence time.

Cleaning

Do not clean the optical breaker with ultrasonic waves.

Note

1.Above specification may be changed without notice. PARA LIGHT will reserve authority on material change for above specification.

2. When using this product, please observe the absolute maximum ratings and the instruction for using outlined in these specification sheets. PARA LIGHT assumes no responsibility for any damage resulting from use of the product which does not comply with the absolute maximum ratings and the instructions included in these specification sheets.

3. In the design phase of the light breaker application, the thermal management of the light breaker must be considered.The current shall be appropriately reduced with reference to the degradation curve in each product specification.

4. The temperature around the application interrupt light device should be controlled.