

东莞市亿彩电子科技有限公司

DONG GUAN EVERCOLOR ELECTRONICS CO.,LTD.

规格书

SPECIFICATION

型号： MODEL：	YC352
版本号： REV：	V1.0

客户承认		
APPROVED BY CUSTOMER		
确认意见 COMMENTS	审核 CHECKED BY	批准 APPROVED BY

客户承认签章后敬请回传正本一份

Please kindly countersign the document and send it back for our record

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YC352

■ Features

- Fast response time
- High sensitivity
- Thin and small package
- Pb free
- This product itself will remain within RoHS compliant version

■ Descriptions

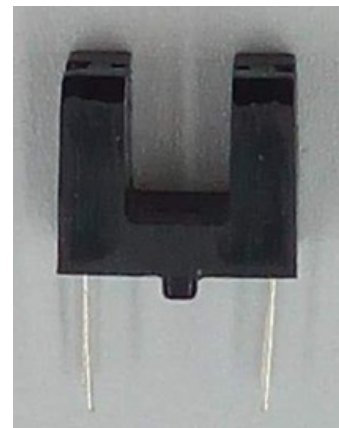
The YC352 consists of an infrared emitting diode and a silicon phototransistor encased in a black thermo-plastic housing. The advantage of the device is the small package. Phototransistor receives radiation from the IR LED only, and avoids the noise from ambient light.

■ Applications

- Camera
- Copier
- Scanner
- Non-contact Switching

■ Device Selection Guide

Device No.	Chip Material
IR	GaAlAs
PT	Silicon

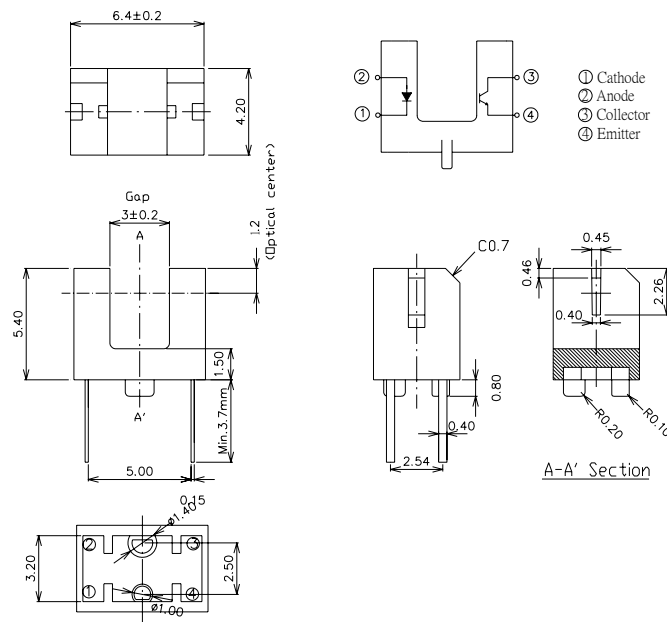


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Package Dimensions



- Notes:** 1.All dimensions are in millimeters
2.Tolerances unless dimensions $\pm 0.2\text{mm}$

Absolute Maximum Ratings ($T_a=25^\circ\text{C}$)

Parameter Sym		bol	Ratings	Unit
Input	Power Dissipation at(or below) 25°C Free Air Temperature	P_d 75		mW
	Reverse Voltage	V_R	5	V
	Forward Current	I_F	50	mA
	Peak Forward Current (*1)	I_{FP}	1	A
	Pulse width $\leq 100 \mu\text{s}$, Duty cycle=1%			
Output	Collector Power Dissipation	P_C 75		mW
	Collector Current	I_C	20	mA
	Collector-Emitter Voltage	B V_{CEO}	30	V
	Emitter-Collector Voltage	B V_{ECO}	5	V
Operating Temperature		T_{opr}	$-25\sim+85$	$^\circ\text{C}$
Storage Temperature		T_{stg}	$-40\sim+85$	$^\circ\text{C}$
Lead Soldering Temperature (*2)		T_{sol}	260	$^\circ\text{C}$

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

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Electro-Optical Characteristics (Ta=25°C)

Parameter Sym		bol	Min.	Typ.	Max.	Unit	Conditions
Input	Forward Voltage	V_F ---		1.2	1.6	V	$I_F=20mA$
	Reverse Current	I_R	---	---	10	μA	$V_R=5V$
	Peak Wavelength	λ_p	---	940	---	nm	$I_F=20mA$
Output	Dark Current	I_{CEO} ---		1	100	nA	$V_{CE}=10V$
	C-E Saturation Voltage	$V_{CE(sat)}$	---	---	0.4	V	$I_C=2mA$ $E_e=1mW/cm^2$
Transfer Characteristics	Collector Current	$I_{C(ON)}$ 0.2		---	5	mA	$V_{CE}=5V$, $I_F=20mA$
	Leakage Current	I_{CEOD}	---	---	1	μA	$V_{CE}=5V$ $I_F=20mA$
	Rise time	t_r ---		15	---	μsec	$V_{CE}=2V$ $I_C=1mA$ $R_L=1K\Omega$
	Fall time	t_f	---	15	---	μsec	

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Typical Electrical/Optical/Characteristics Curves for IR

Fig.1 Forward Current vs.
Ambient Temperature

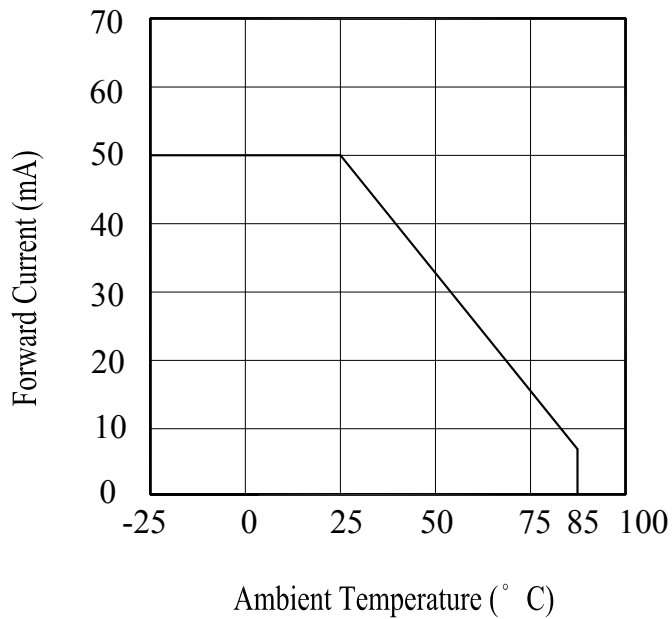
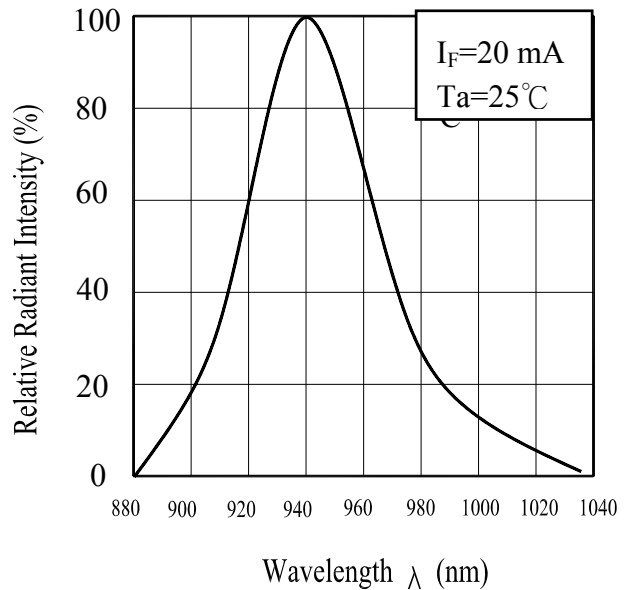


Fig.2 Spectral



Distribution

Fig.3 Peak Emission Wavelength
Ambient Temperature

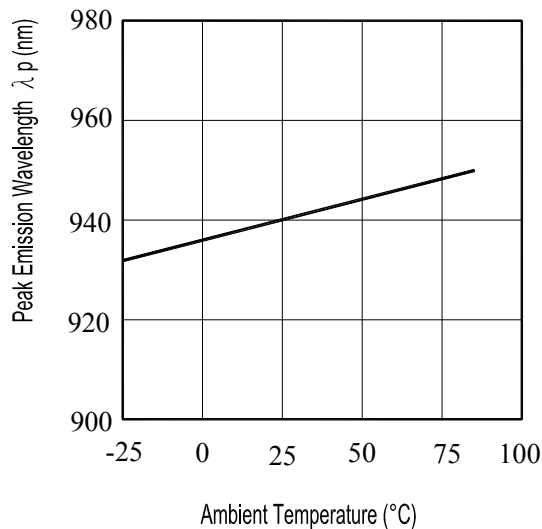
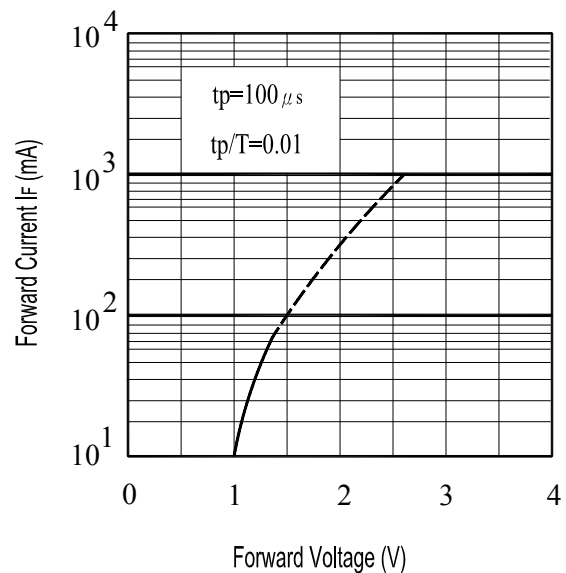


Fig.4 Forward

Current vs. Forward Voltage



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Fig.5 Forward Voltage vs.
Ambient Temperature(°C)

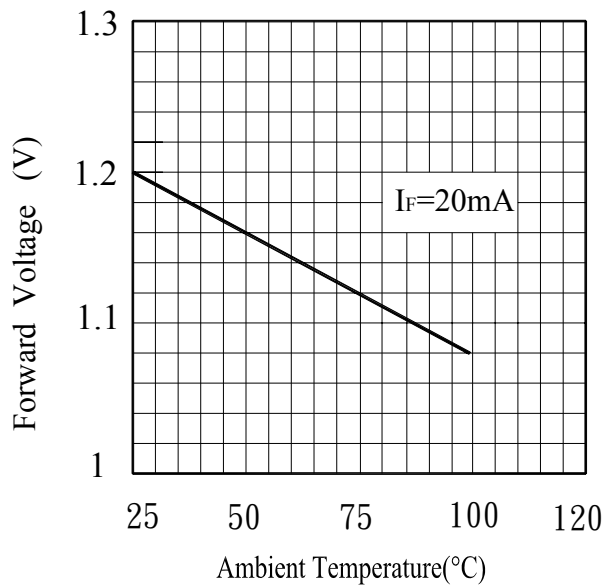
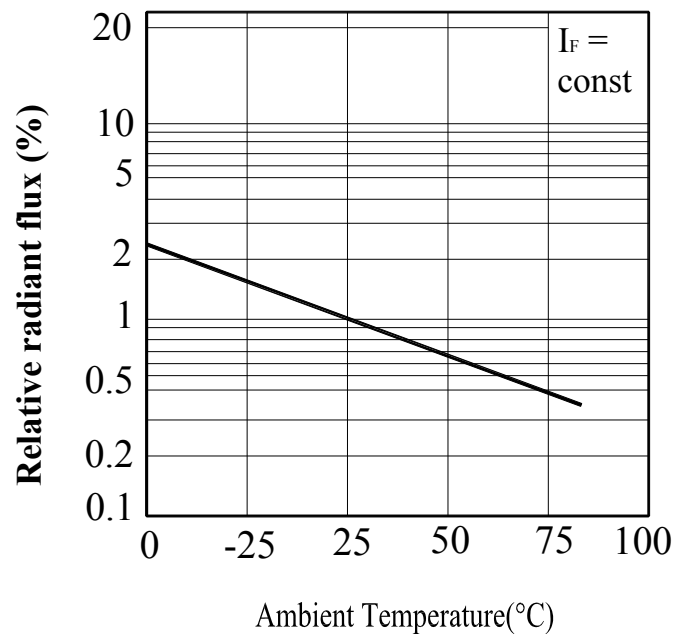


Fig.6 Relative Radiant Flux vs.
Ambient Temperature(°C)



Typical Electrical/Optical/Characteristics Curves for PT

Fig.1 Collector Power Dissipation vs.
Ambient Temperature

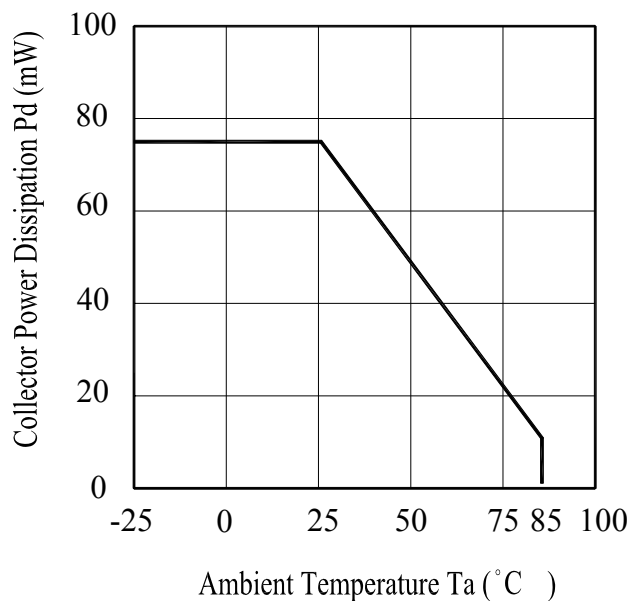


Fig.2 Spectral Sensitivity

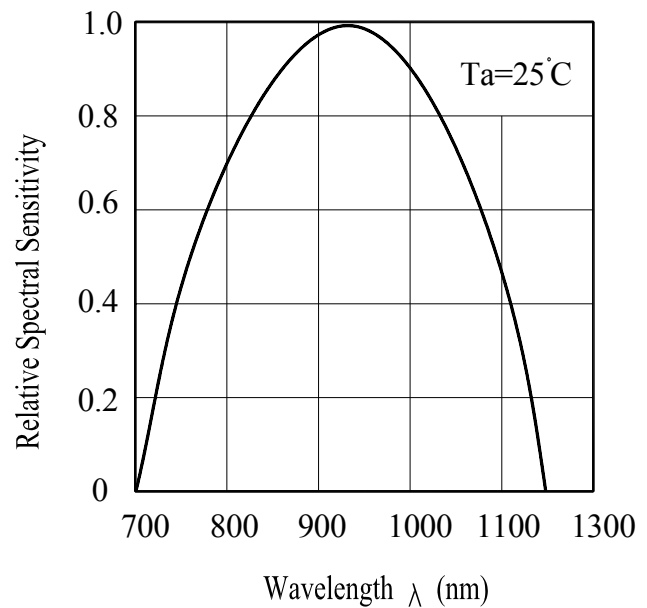


Fig.3. Collector Dark Current vs.
Ambient Temperature

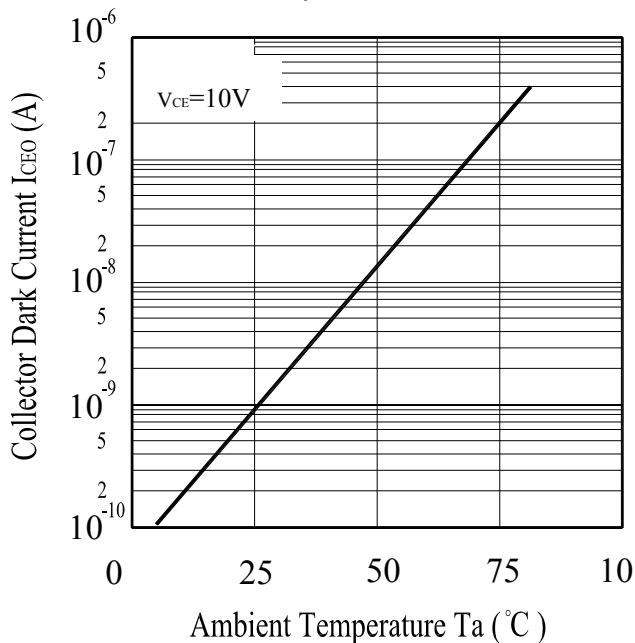
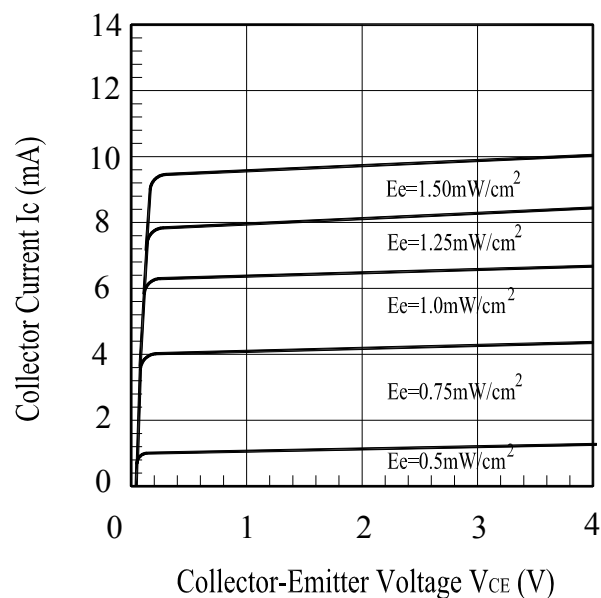


Fig.4 Collector Current vs.
Collector-Emitter Voltage



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Reliability Test Item And Condition

The reliability of products shall be satisfied with items listed below.

Confidence level : 90%

LTPD : 10%

NO.	Item	Test Conditions	Test Hours/ Cycles	Sample Sizes	Failure Judgment Criteria	Ac/Re
1	Solder Resistance	Ta = 260 ±5°C 10	sec	22pcs	$I_R \geq U \times 2$ $E_e \leq L \times 0.8$ $V_F \geq U \times 1.2$ U : Upper Specification Limit L : Lower Specification Limit	0/1
2	Temperature Cycle	H : +100°C 15mins ↕ 5mins L : -40°C 15mins	300Cycles	22pcs		0/1
3	Thermal Shock	H : +100°C 5mins ↕ 10secs L : -10°C 5mins	300Cycles	22pcs		0/1
4	High Temperature Storage	TEMP. : +100°C	1000hrs	22pcs		0/1
5	Low Temperature Storage	TEMP. : -40°C	1000hrs	22pcs		0/1
6	DC Operating Life	V _{CE} =5V 1000hrs		22pcs		0/1
7	High Temperature/ High Humidity	85°C / 85% R.H	1000hrs	22pcs		0/1

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Packing Quantity Specification

200 pcs/1bag , 6 bags/1box , 10 boxes/1carton

Label Form Specification

The diagram shows a rectangular label with the following fields and barcodes:

- CPN: (empty box)
- P/N: (empty box)
- YC352 (large text)
- QTY: (empty box)
- CAT: (empty box)
- HUE: (empty box)
- REF: (empty box)
- LOT NO: (empty box)
- MADE IN TAIWAN (text at the bottom)

CPN: Customer's Production Number

P/N : Production Number

QTY: Packing Quantity

CAT: Ranks

HUE: Peak Wavelength

REF: Reference

LOT No: Lot Number

MADE IN TAIWAN: Production Place

Notes

1. Above specification may be changed without notice. Dong Guan YICAI will reserve authority on material change for above specification.
2. When using this product, please observe the absolute maximum ratings and the instructions for using outlined in these specification sheets. Dong Guan YICAI 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.
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