

PC355NT

加急出货
Opaque*, **Mini-Flat** Package,
High Sensitivity Photocoupler

■ Features

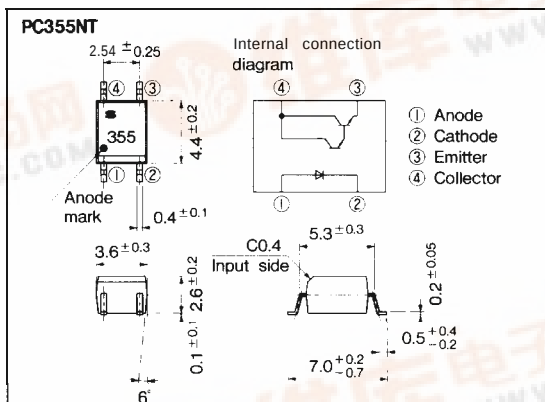
1. High current transfer ratio
(CTR : MIN. 600% at $I_F = 1\text{mA}$, $V_{CE} = 2\text{V}$)
 2. Opaque type, mini-flat package
PC355NT (1-channel)
 3. Subminiature type
(The volume is smaller than that of our conventional DIP type by as far as 30%)
 4. Isolation voltage between input and output
PC355NT ··Viso : 3 750V_{rms}
- * Employs double transfer mold technology

■ Applications

1. Hybrid substrates that require high density mounting.
2. Programmable controllers

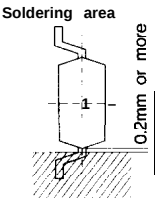
■ Outline Dimensions

(Unit : mm)



■ Absolute Maximum Ratings (Ta=25℃)

Parameter		Symbol	Rating	Unit
Input	Forward current	IF	50	mA
	*1 Peak forward current	IFM	1	A
	Reverse voltage	VR	6	v
	Power dissipation	P	70	mW
output	Collector-emitter voltage	VCEO	35	v
	Emitter-collector voltage	VECO	6	v
	Collector current	IC	80	mA
	Collector power dissipation	PC	150	mW
Total power dissipation		Ptot	170	mW
*Isolation voltage		V(is.)	3 750	Vrms
Operating temperature		Topr	-30 to +100	°C
Storage temperature		Tstg	-40 to +125	°C
*3 Soldering temperature		Tsol	260	°C



*1 Pulse width ≤ 100 μs, Duty ratio = 0.001
*2 40 to 60%RH, AC for 1 minute
*3 For 10 seconds

■ Electro-optical Characteristics (Ta=25℃)

Parameter			Symbol	Conditions	MIN.	TYP.		
Input	Forward voltage		V _F	I _F = 20mA	—	1.2	1.4	V
	Reverse current		I _R	V _R = 4V	—	—	10	μA
	Terminal capacitance		C _t	V = 0, f = 1kHz	—	30	250	pF
output	Collector dark current		I _{CEO}	V _{CE} = 10V, I _F = 0	—	—	10 ⁻⁶	A
	Collector-emitter breakdown voltage		BV _{CEO}	I _C = 0.1mA, I _F = 0	35		—	V
	Emitter -collector breakdown voltage		BV _{ECO}	I _E = 10 μA, I _F = 0	6		—	V
Transfer charac- teristics	Current transfer ratio		CTR	I _F = 1mA, V _{CE} = 2V	600	1 600	7500	%
	Collector-emitter saturation voltage		V _{CE(sat)}	I _F = 20mA, I _C = 1mA	—	0.8	1.0	V
	Isolation resistance		R _{ISO}	DC500V, 40 to 60%RH	5×10 ¹⁰	10 ¹¹		Ω
	Floating capacitance		C _f	V = 0, f = 1MHz	—	0.6	1.0	pF
	Response time	Rise time	t _r	V _{CE} = 2V, I _C = 2mA		—	60	300
Fall time		t _f	R _L = 100Ω		—	53	250	μs

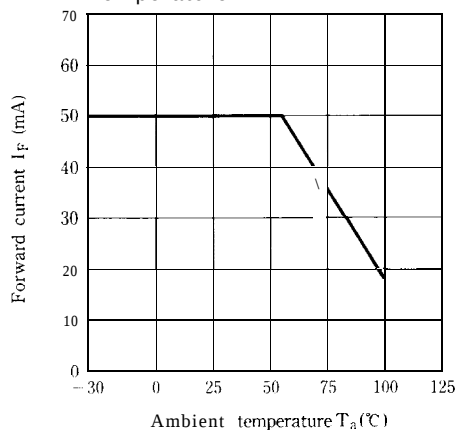
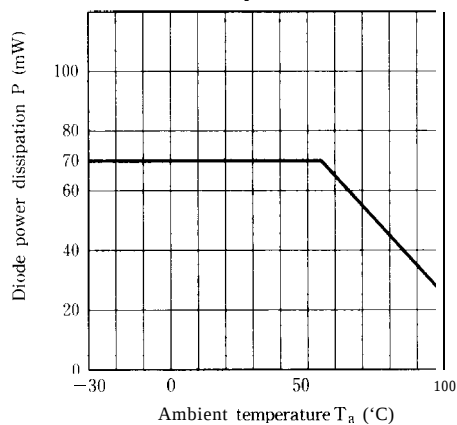
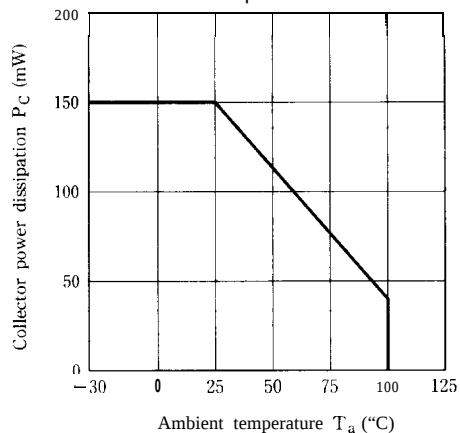
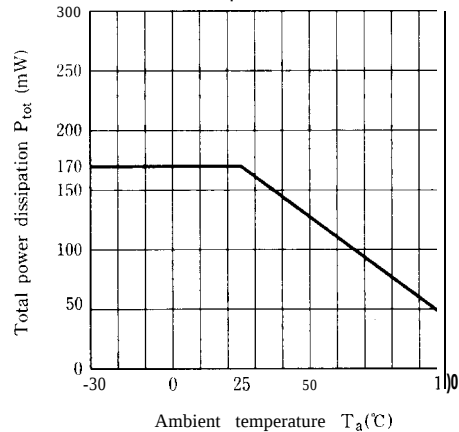
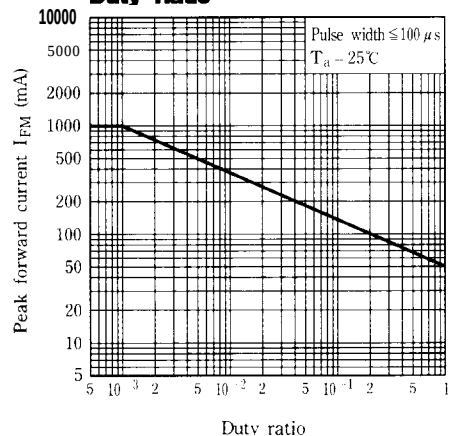
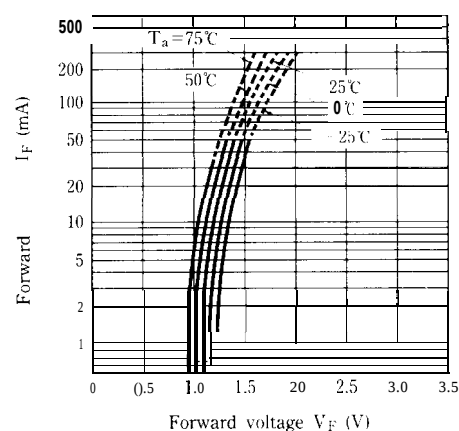
Fig. 1 Forward Current vs. Ambient Temperature**Fig. 2 Diode Power Dissipation vs. Ambient Temperature****Fig. 3 Collector Power Dissipation vs. Ambient Temperature****Fig. 4 Total Power Dissipation vs. Ambient Temperature****Fig. 5 Peak Forward Current vs. Duty Ratio****Fig. 6 Forward Current vs. Forward Voltage**

Fig. 7 Current Transfer Ratio vs. Forward Current

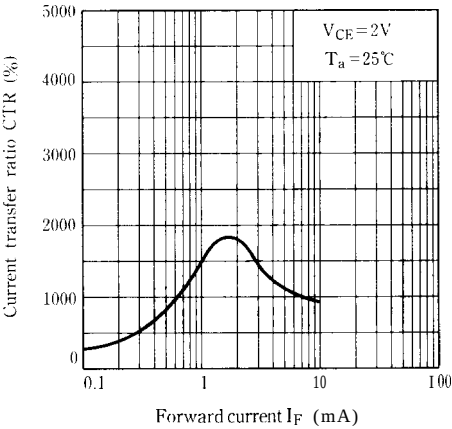


Fig. 9 Relative Current Transfer Ratio vs. Ambient Temperature

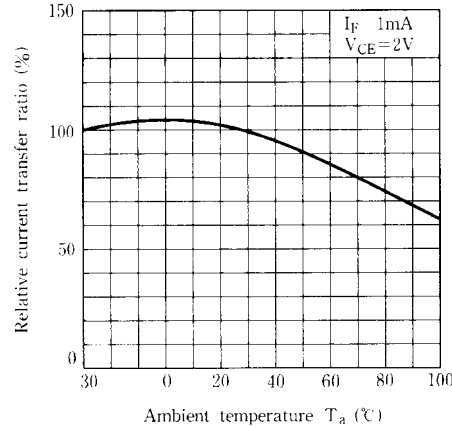


Fig.11 Collector Dark Current vs. Ambient Temperature

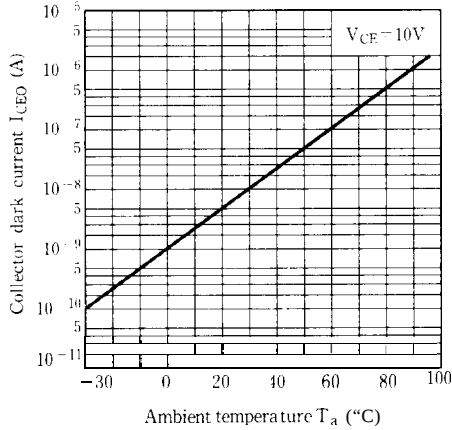


Fig. 8 Collector Current vs. Collector-emitter Voltage

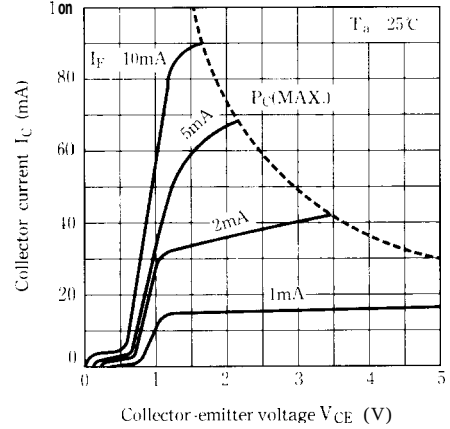


Fig.10 Collector-emitter Saturation voltage vs. Ambient Temperature

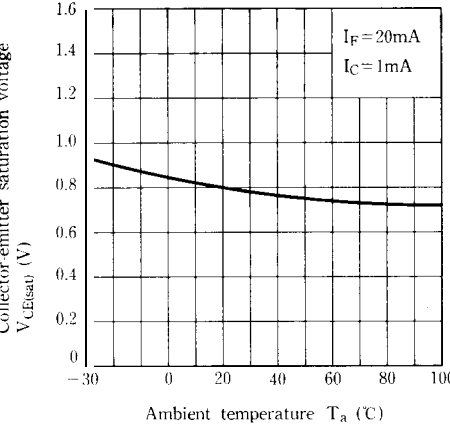
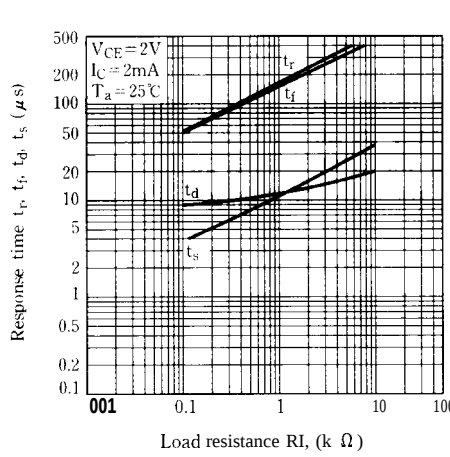
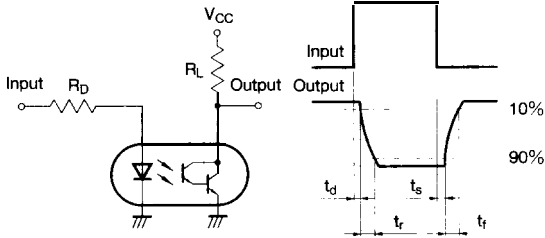
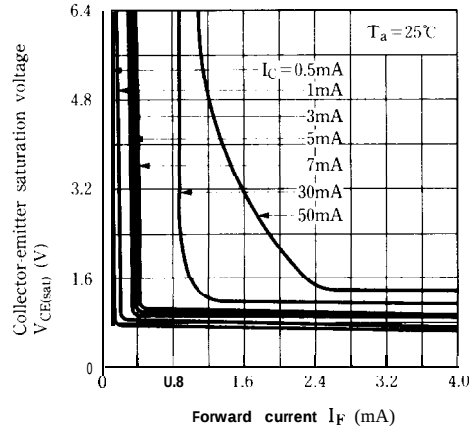
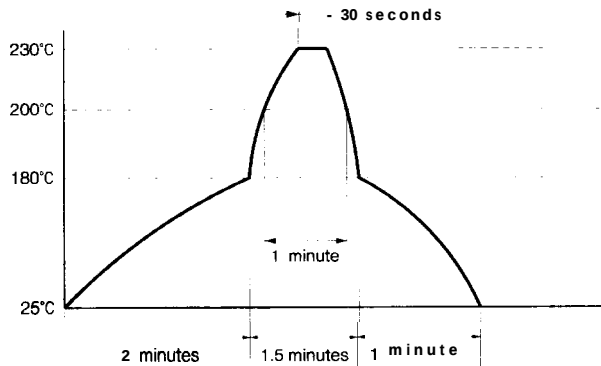


Fig.12 Responce Time vs. Load Resistance



Test Circuit For Response Time**Fig.13 Collector-emitter Saturation Voltage vs. Forward Current****Temperature Profile of Soldering Reflow**

- (1) One time soldering reflow is recommended within the condition of temperature and time profile shown below.

PC355NT

- (2) When using another soldering method such as infrared ray lamp, the temperature may rise partially in the mold of the device.

Keep the temperature on the package of the device within the condition of above (1).

. Please refer to the chapter "Precautions for Use." (Page 78 to 93)