PRODUCT SPECIFICATION

DATE:07/22/2008

cosmo ELECTRONICS CORPORATION	Photocoupler : KPC355NT	NO.61P04051	REV. 2
		SHEET 1 OF 6	

High Reliability Photocoupler

●Features

1.High current transfer ratio.

(CTR : MIN.600% at I_F =1mA, Vce=2V)

2.High isolation voltage between input and output (Viso : 3750Vrms).

3.Mini-flat package.

●Applications

1. System appliances, measuring instruments.
2. Industrial robots.
3. Copiers, automatic vending machines.
4. Signal transmission between circuits of different potentials and impedances.
5. Telephone sets.
6. Copiers, facsimiles.
7. Interface with various power supply circuits, power distribution boards.
8. Numerical control machines.

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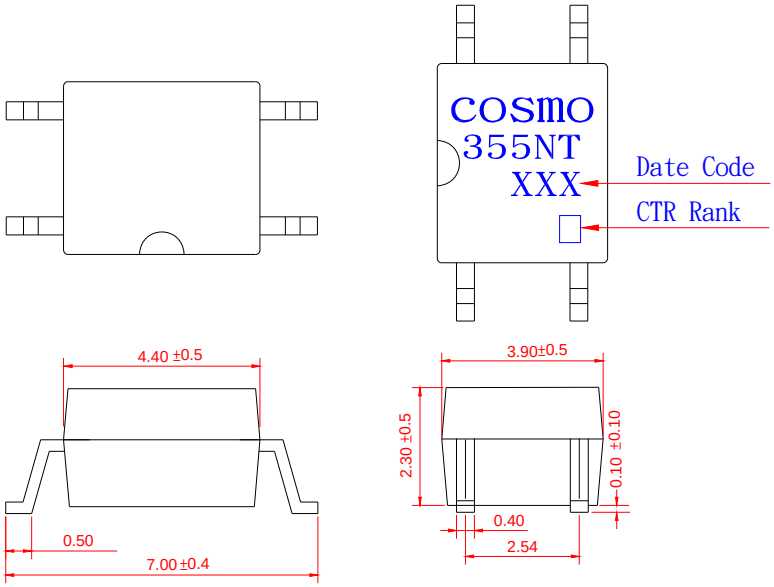
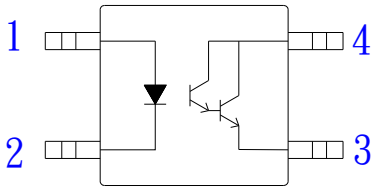
1. OUTSIDE DIMENSION : UNIT (mm)



TOLERANCE : ±0.2mm

2. SCHEMATIC : TOP VIEW



1.Anode
2.Cathode
3.Emitter
4.Collector

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●Absolute Maximum Ratings

Parameter		Symbol	Rating	Unit
Input	Forward current	I_F	50	mA
	Peak forward current	I_{FM}	1	A
	Reverse voltage	V_R	6	V
	Power dissipation	P_D	70	mW
Output	Collector-emitter voltage	V_{CEO}	35	V
	Emittor-collector voltage	V_{ECO}	5	V
	Collector current	I_C	150	mA
	Collector power dissipation	P_C	150	mW
Total power dissipation		Ptot	170	mW
Isolation voltage 1 minute		Viso	3750	Vrms
Operating temperature		Topr	-55 to +115	℃
Storage temperature		Tstg	-55 to +125	℃
Soldering temperature 10 second		Tsol	260	℃

●Electro-optical Characteristics

Parameter		Symbol	Conditions	MIN.	TYP.	MAX.	Unit
Input	Forward voltage	V_F	IF=20mA	-	1.2	1.4	V
	Peak forward voltage	V_{FM}	IFM=0.5A	-	-	3.5	V
	Reverse current	I_R	VR=4V	-	-	10	uA
	Terminal capacitance	Ct	V=0, f=1kHz	-	30	-	pF
Output	Collector dark current	I_{CEO}	V_{CE}=10V, I_F=0	-	-	1.0	uA
Tranfer charac-teristics	Current transfer ratio	CTR	I_F=1mA, V_{CE}=2V	600	1600	7500	%
	Collector-emitter saturation	V_{CE}(sat)	I_F=20mA, Ic=1mA	-	-	1.0	V
	Isolation resistance	Riso	DC500V	$5x10^{10}$	-	-	ohm
	Floating capacitance	C_f	V=0, f=1MHz	-	0.6	1.0	pF
	Cut-off frequency	fc	Vcc=5V,Ic=2mA,RL=100ohm	-	7	-	kHz
	Response time (Rise)	tr	Vce=2V,Ic=2mA,RL=100ohm	-	60	300	us
	Response time (Fall)	tf		-	53	250	us

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Fig.1 Forward Current vs. Ambient Temperature

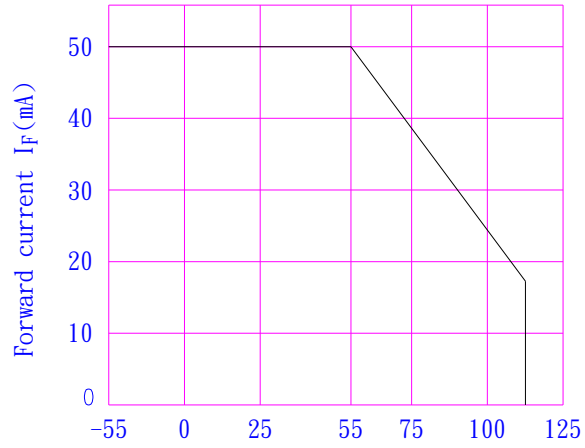

Fig.2 Collector Power Dissipation vs. Ambient Temperature

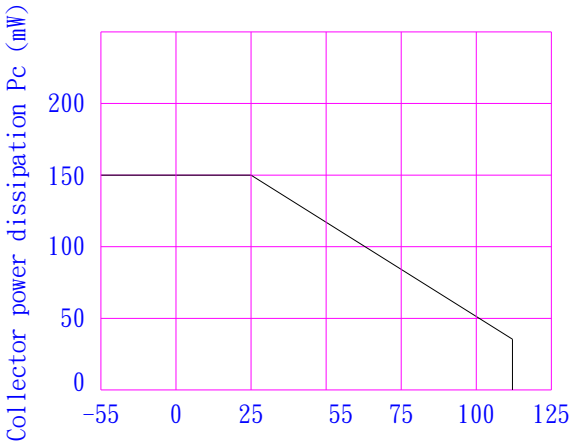

Fig.3 Peak Forward Current vs. Duty Ratio

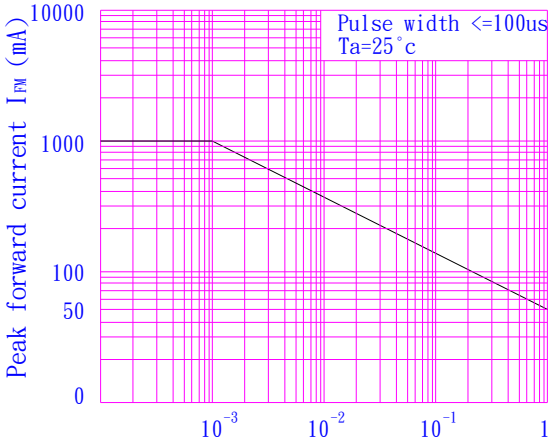

Fig.4 Forward Current vs. Forward Voltage

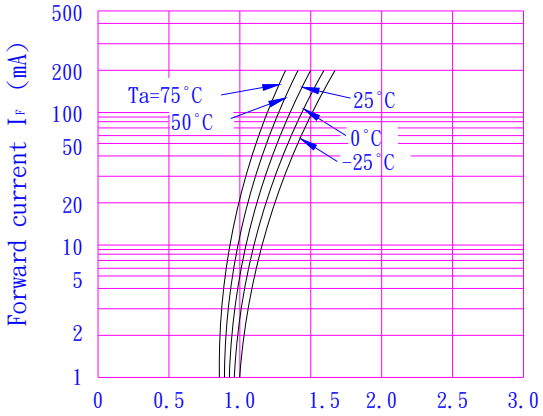

Fig.5 Current Transfer Ratio vs. Forward Current

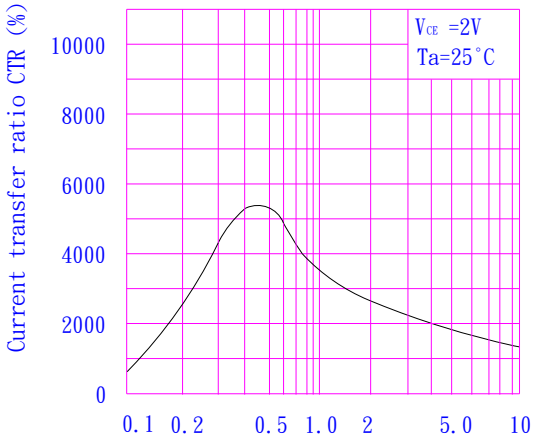

Fig.6 Collector Current vs. Collector-emitter Voltage

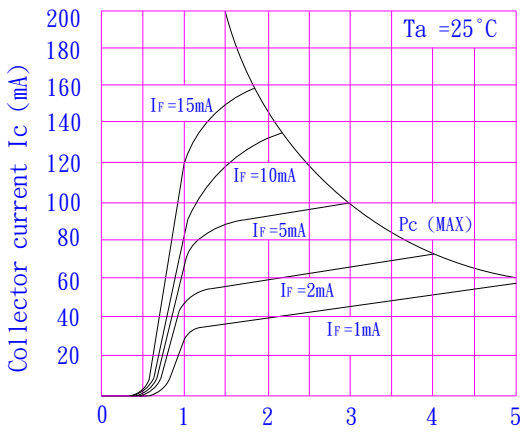

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Fig.7 Relative Current Transfer Ratio vs. Ambient Temperature

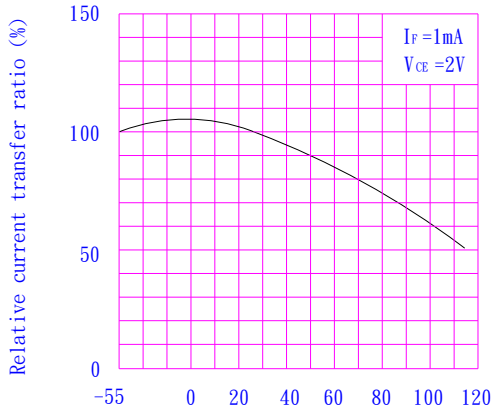


Fig.8 Collector-emitter Saturation Voltage vs. Ambient Temperature

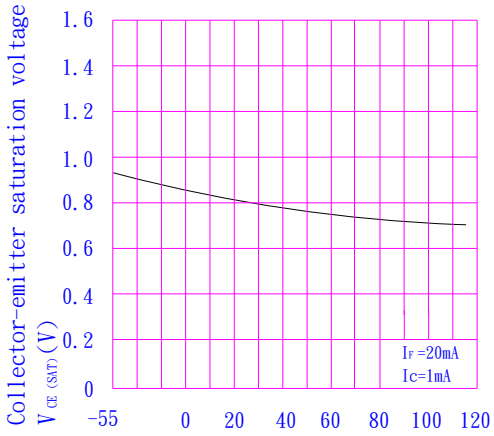


Fig.9 Collector Dark Current vs. Ambient Temperature

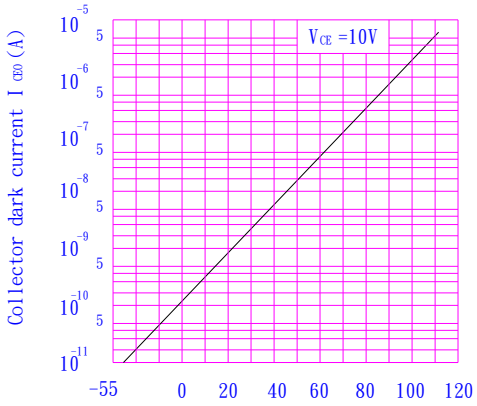


Fig.10 Response Time vs. Load Resistance

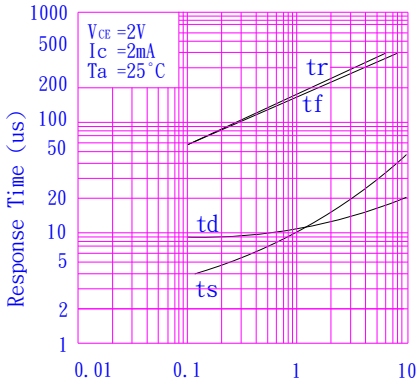
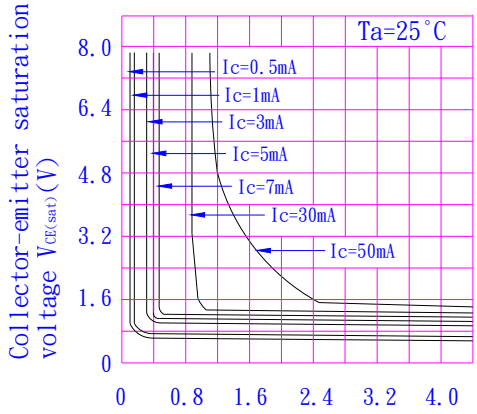


Fig.11 Collector-emitter Saturation Voltage vs. Forward current



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