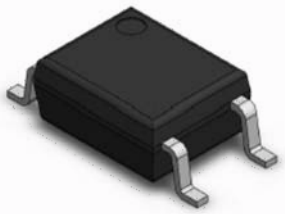
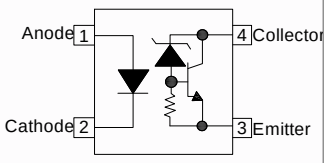
DESCRIPTION:

The products are transistor output opto-couplers in a plastic SOP4 package. The device which is infrared LED chip and Photo-transistor chip are assembled on lead frame, in order to change the electricity-light-electricity. The products are widely used in transmission and conversion of digital logic, power control and switch, electric insulation and impedance conversion between circuits systems.





MAIN FEATURES

High isolation 3750 VRMS
Operating temperature range -40°C to 110°C
RoHS & REACH Compliance
HBM: H3A; MM: M4; CDM:C3
CQC approved
VDE approved
UL approved

ABSOLUTE MAXIMUM RATINGS (Temperature=25°C)

Input	Forward Current	I_F	50	mA
	Peak Forward Current	I_{FP}	1	A
	Reverse Voltage	V_R	6	V
	Power Dissipation	P_D	75	mW
Output	Collector-emitter Voltage	V_{CEO}	40	V
	Emitter-collector Voltage	V_{ECO}	7	V
	Collector Current	I_C	50	mA
	Power Dissipation	P_C	150	mW
Total Power Dissipation		P_{tot}	225	mW
Isolation Voltage		V_{iso}	3750	Vrms
Operating Temperature		T_{opr}	-40~+110	
Junction Temperature		T_j	125	

Storage Temperature	T_{stg}	-55~+125	
Soldering Temperature	T_{sol}	260	

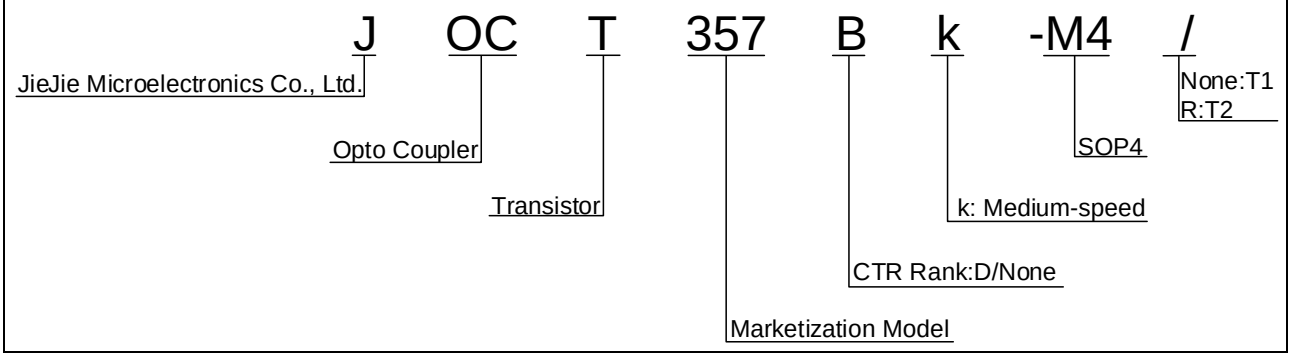
NOTE1 100μs pulse, 100Hz frequency

NOTE2 AC for 1minute, R.H.=40~60%

ELECTRICAL CHARACTERISTICS (Temperature=25°C)

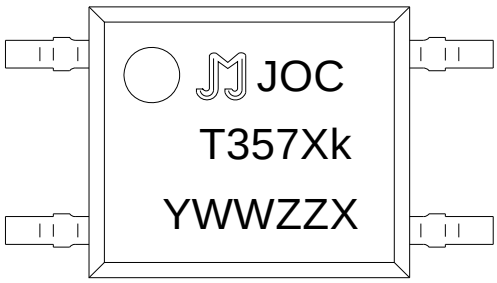
	Forward Voltage	V_F	I_F=10mA	-	1.2	1.5	V
Input	Reverse Current	I_R					

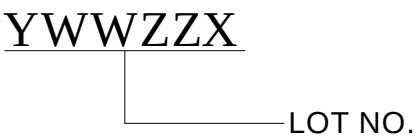
ORDERING INFORMATION



Packing Quantity	
Option	**Quantity**
None/R	3000 Units/Reel

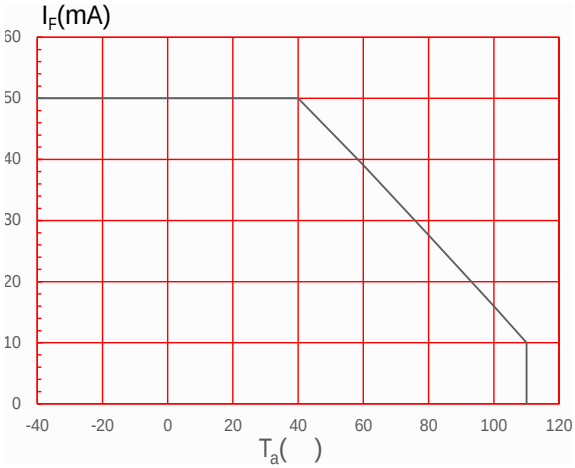
MARKING



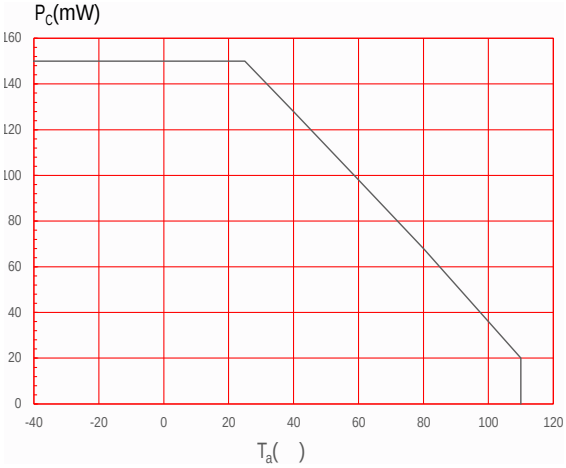


Characteristics Curves

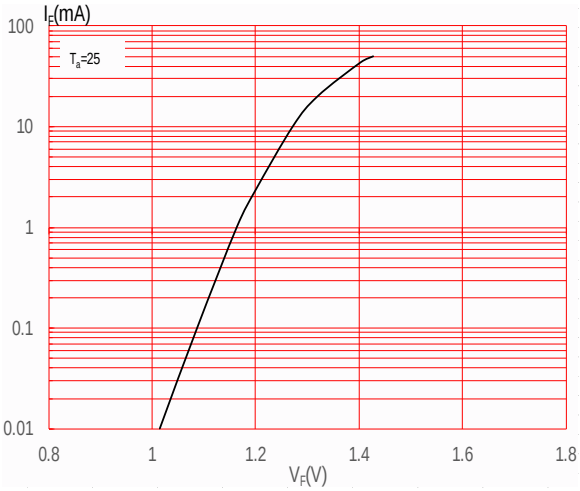
Max. Allowable LED Forward Current vs. Ambient Temperature



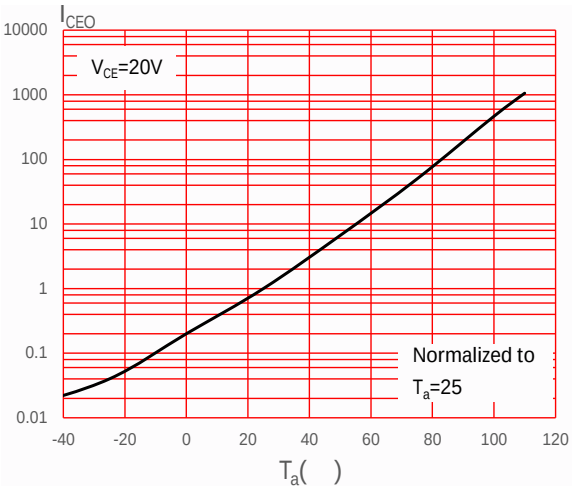
Collector Power Dissiption vs. Ambient Temperature



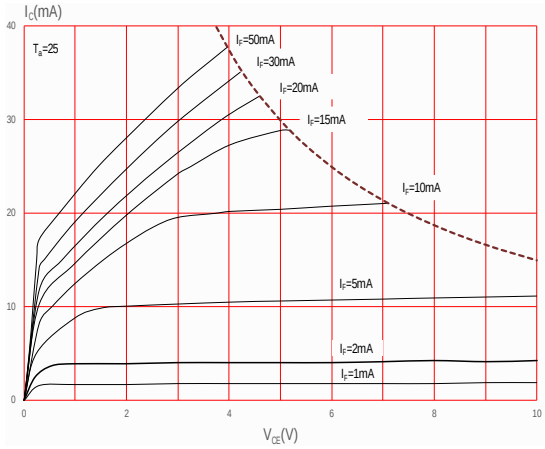
Forward Current vs. Forward Voltage



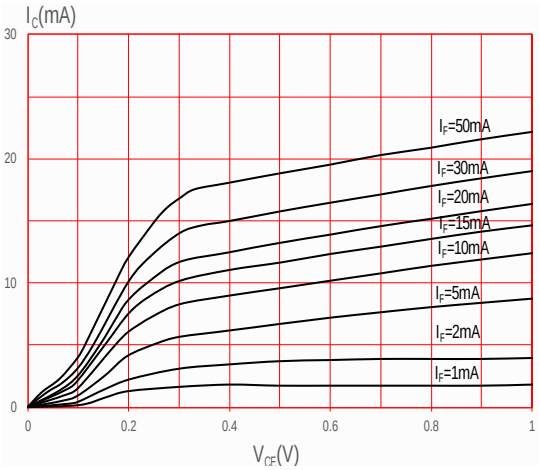
Normalized Collector Dark Current vs. Ambient Temperature



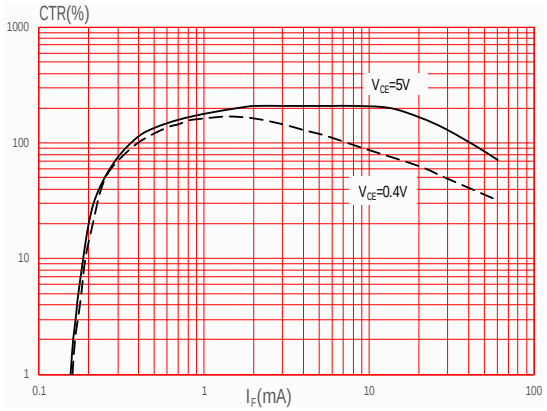
Collector Current vs. Collector-emitter Voltage



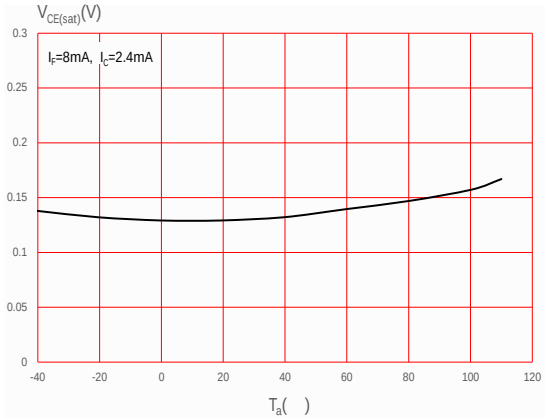
Collector Current vs. Collector-emitter Voltage



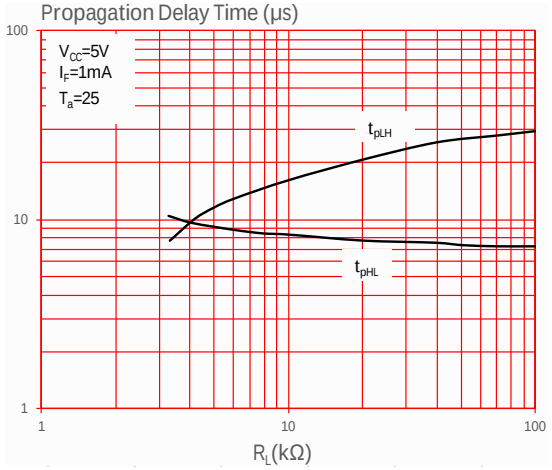
Current Transfer Ratio vs. Forward Current



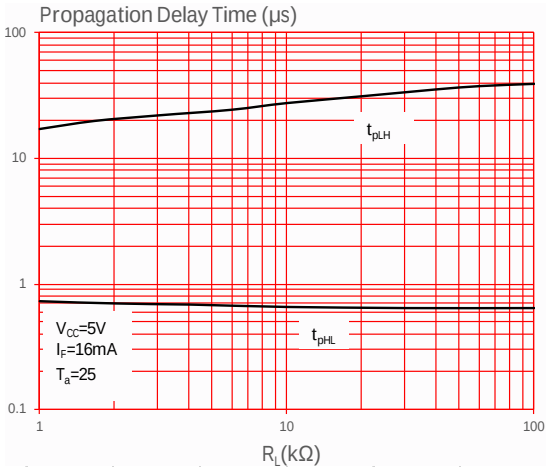
Normalized Collector-emitter Saturation Voltage vs. Ambient Temperature



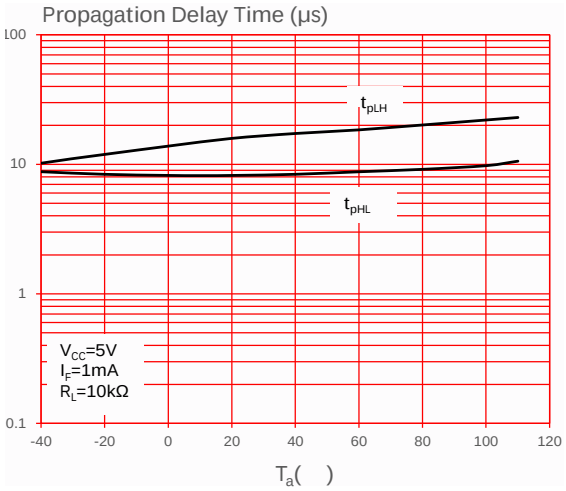
Propagation Delay Time vs. Load Resistance



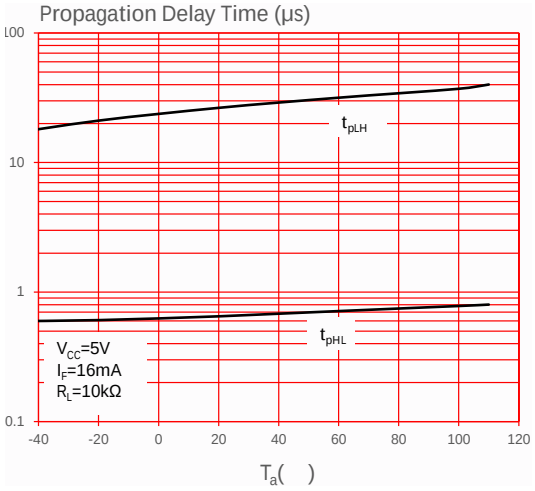
Propagation Delay Time vs. Load Resistance



Propagation Delay Time vs. Ambient Temperature



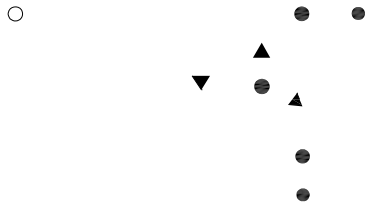
Propagation Delay Time vs. Ambient Temperature



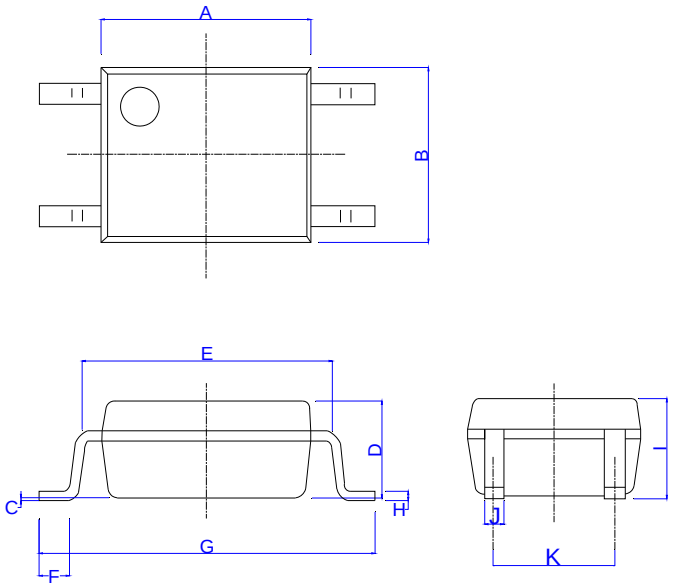
Test Circuits

Test Circuits of Propagation Delay Time

Curves of Propagation Delay Time

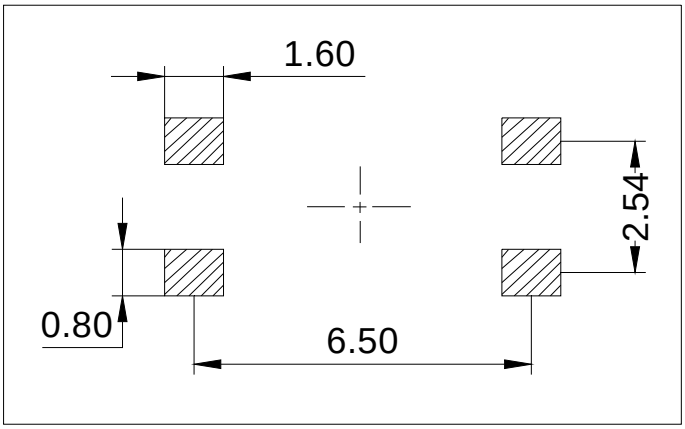


Package Dimension (Unit: mm)



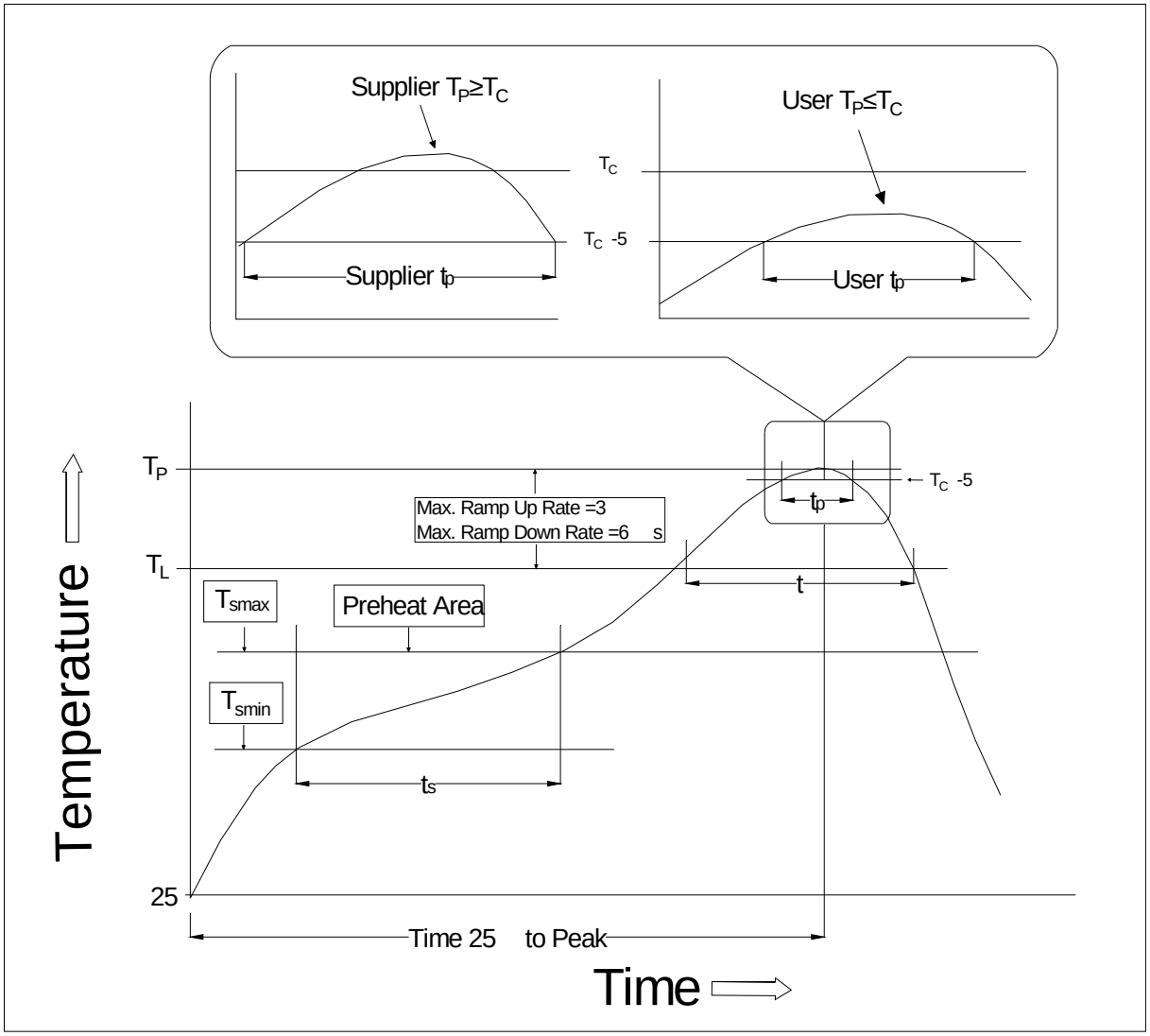
Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	4.40		4.80	0.173		0.189
B	3.60		4.20	0.142		0.165
C	0.00		0.20	0.000		0.008
D	1.90		2.30	0.075		0.091
E	5.00		5.60	0.197		0.220
F	0.34		0.94	0.013		0.037
G	6.70		7.30	0.264		0.287
H	0.10		0.30	0.004		0.012
I	2.00		2.40	0.079		0.094
J	0.25		0.55	0.010		0.022
K	2.29		2.79	0.090		0.110

RECOMMENDED SOLDER MASK (Dimensions in mm unless otherwise stated)



CARRIER TAPE SPECIFICATIONS (Dimensions in mm unless otherwise stated)

REFLOW INFORMATION



Temperature Min. (Tsmin)	100	150
Temperature Max. (Tsmax)	150	200
Time (ts) from (Tsmin to Tsmax)	60-120 seconds	60-120 seconds
Ramp-up Rate (tL to tP)	3 /second max.	3 /second max.
Liquidus Temperature (TL)	183	217
Time (tL) Maintained Above (TL)	60-150 seconds	60-150 seconds
Peak Body Package Temperature	235 +0 /-5	260 +0 /-5
Time (tP) within 5 of 260	20 seconds	30 seconds
Ramp-down Rate (TP to TL)	6 /second max.	6 /second max.
Time 25 to Peak Temperature	6 minutes max.	8 minutes max.

Note:

1. Reflow soldering is recommended at the temperatures and times shown, no more than three times.

2. Avoid direct contact between the epoxy body and any tools or surfaces exceeding its maximum storage temperature.

3. Application of pressure on the epoxy body is prohibited at elevated temperatures. In specific scenarios, any applied force must not exceed 2.5N.

4. Ensure the component has cooled to ambient temperature before proceeding with any subsequent manufacturing steps.

5. The component has a shelf life of one year when stored under standard conditions.

6. Recommend storage Temp.: 0~40°C;

Recommend storage humidity: <60%;

MSL level: MSL 1