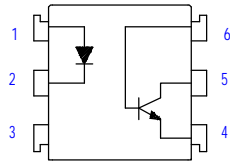


Schematic:



For dimensions and pin-outs, see the last page of this document.

Features:

1. Current transfer ratio
(CTR min 40% at $I_F=10\text{mA}$ $V_{CE}=0.04\text{V}$)
2. High isolation voltage between input and output
(Viso = 5300Vrms, 7500Vpk).

Ordering:

Suffix to Standard Part Number

- V = VDE Compliant
- G = 10mm Lead Spread
- S = Surface Mount Lead-form
- T = Tape & Reel

Superior OPTO Part Number:

OPTO611

Absolute Maximum Ratings:

Parameter		Symbol	Rating	Unit
Input	Peak forward current	I_{FM}	1	A
	Reverse voltage	V_R	6	V
	Power dissipation	P_D	70	mW
	Collector-emitter voltage	V_{CEO}	50	V
Output	Emitter-collector voltage	V_{ECO}	6	V
	Collector-base voltage	V_{CBO}	60	V
	Emitter-base voltage	V_{EBO}	6	V
	Collector current	I_C	50	mA
	Collector power dissipation	P_C	150	mW
	Total power dissipation	P_{tot}	200	mW
	Isolation voltage 1 minute	V_{iso}	5300	Vrms
	V_{iso}	7500	Vpk	
Operating temperature		T_{opr}	-55 to +100	°C
Storage temperature		T_{stg}	-55 to +125	°C
Soldering Temperature 10 seconds		T_{sol}	260	°C

Electrical Characteristics:

Parameter		Symbol	Conditions	MIN.	TYP.	MAX.	Unit
Input	Forward voltage	V _F	$I_F=20\text{mA}$	-	1.2	1.4	V
	Peak forward voltage	V _{FM}	$I_{FM}=0.5\text{A}$	-	-	3.5	V
	Reverse current	I _R	$V_R=4\text{V}$	-	-	10	µA
	Terminal capacitance	C _t	$V=0, f=1\text{kHz}$	-	30	-	pF
Output	Collector dark current	I _{CEO}	$V_{CE}=20\text{V}$	-	-	0.1	µA
Transfer characteristics	Current transfer ratio	CTR	$I_F=10\text{mA}, V_{CE}=0.04\text{V}$	40	-	-	%
	Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_F=10\text{mA}, I_C=4\text{mA}$	-	0.1	0.4	V
	Isolation resistance	R _{iso}	DC500V	5×10^{10}	10^{11}	-	ohm
	Floating capacitance	C _f	$V=0, f=1\text{MHz}$	-	0.6	1.0	Pf
	Cut-off frequency	f _c	$V_{CC}=5\text{V}, I_C=2\text{mA}, R_L=100\text{ohm}$	-	80	-	kHz
	Response time (Rise)	t _r	$V_{CE}=2\text{V}, I_C=2\text{mA}, R_L=100\text{ohm}$	-	5	20	µs
	Response time (Fall)	t _f		-	4	20	µs

Fig. 1 Current Transfer Ratio
 Vs. Forward Current

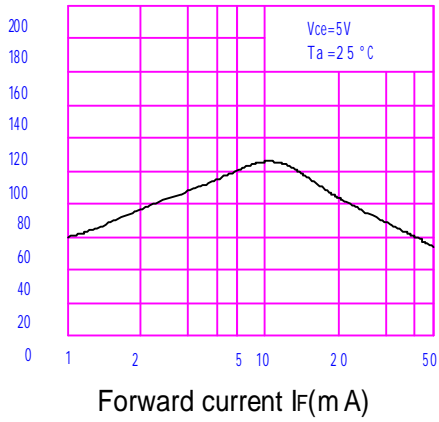


Fig.2 Collector Power Dissipation
 vs. Ambient Temperature

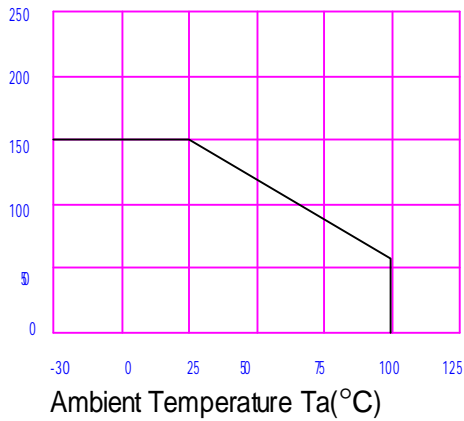


Fig.3 Collector Dark Current vs.
 Ambient Temperature

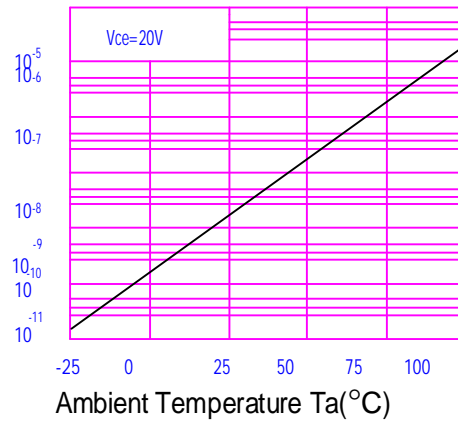


Fig.4 Forward Current vs.
 Ambient Temperature

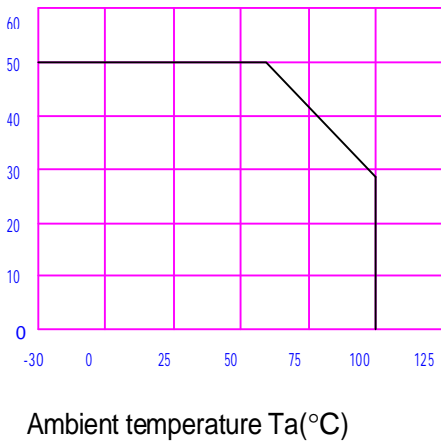


Fig.5 Forward Current vs.
 Forward Voltage

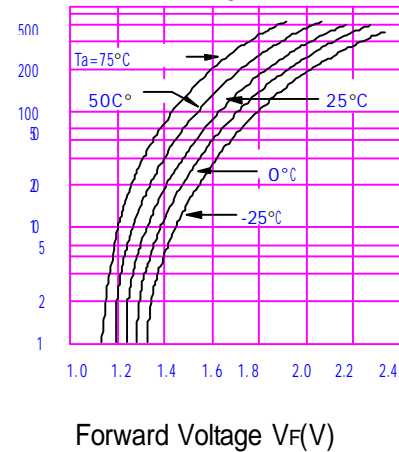
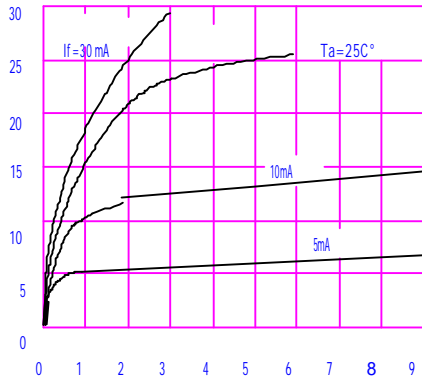


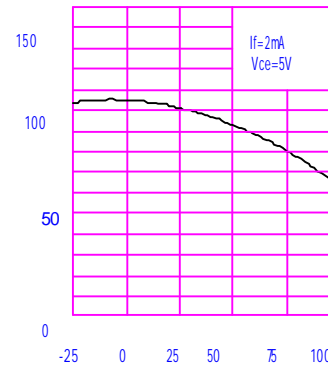
Fig.6 Collector Current vs.

Collector-emitter Voltage



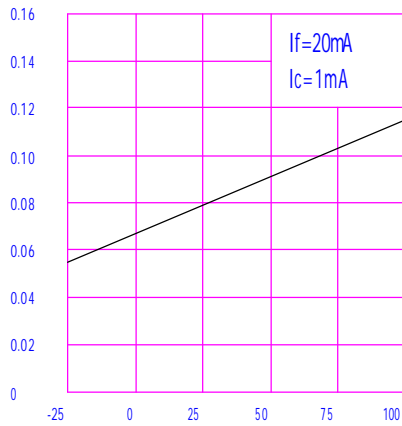
Collector-emitter Voltage V_{CE} (V)

Fig.7 Relative Current Transfer Ratio



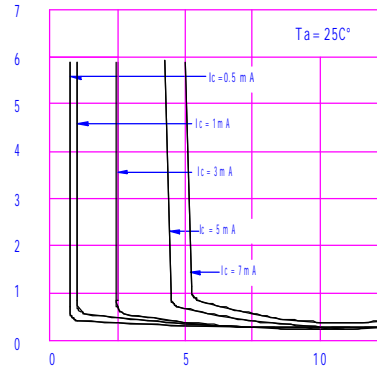
Ambient Temperature T_a (°C)

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



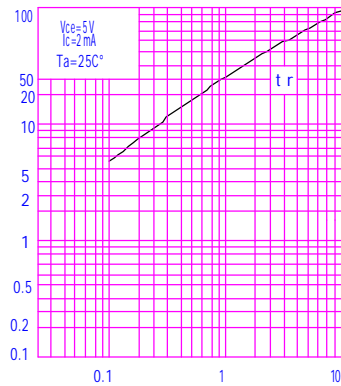
Ambient Temperature T_a (°C)

Fig.9 Collector-emitter Saturation Voltage vs. Forward Current



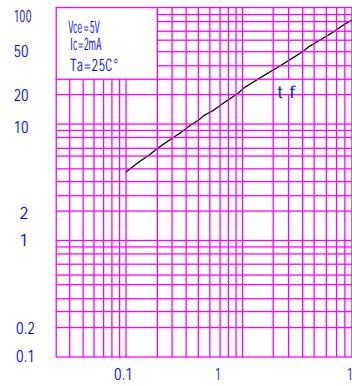
Forward Current I (mA)

Fig.10 Response Time vs. Load Resistance



Load Resistance R_L (Kohm)

Fig.11 Response Time vs. Load Resistance



Load Resistance R_L (Kohm)

Fig.4 : 6-pin DIP type

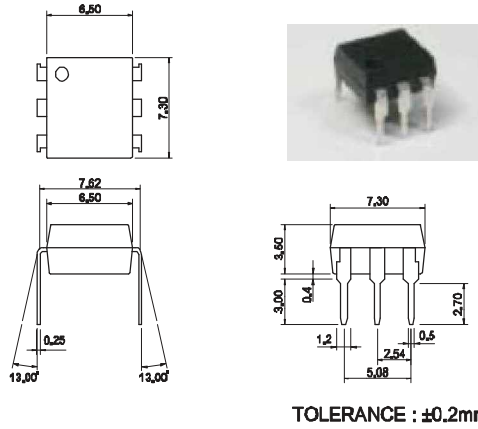


Fig.5 : 6-pin SMD type

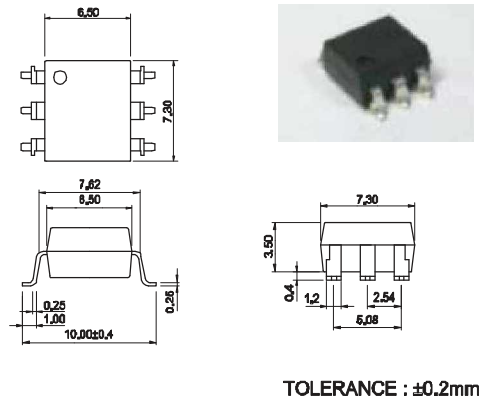
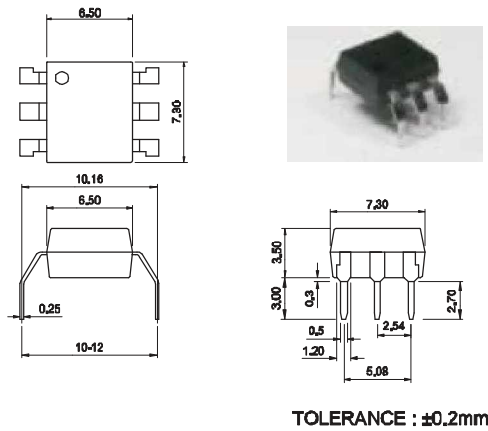


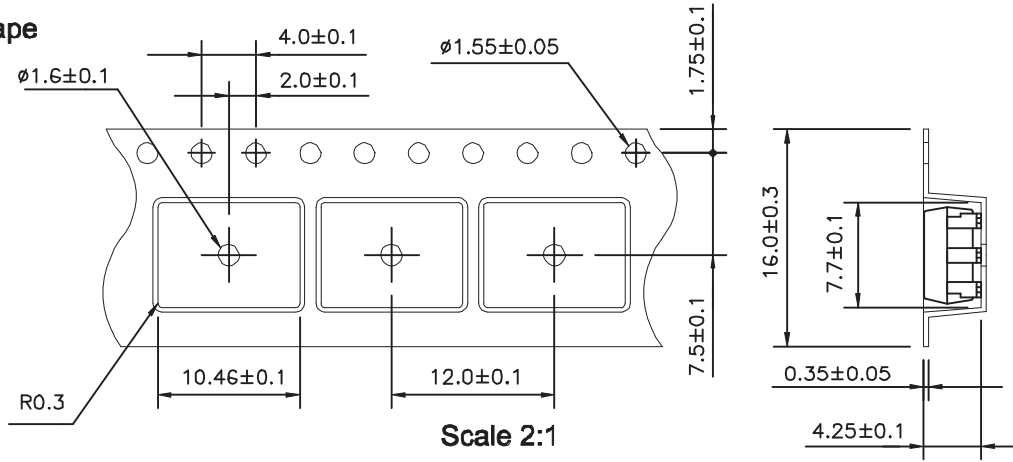
Fig.6 : 6-pin G type



6-pin SMD Carrier Tape & Reel

Unit:mm

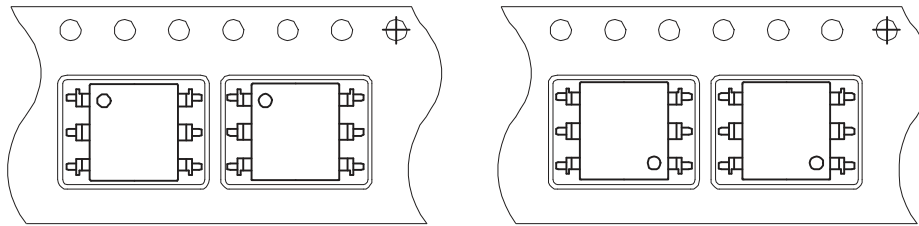
Tape



Scale 2:1

Material : PS

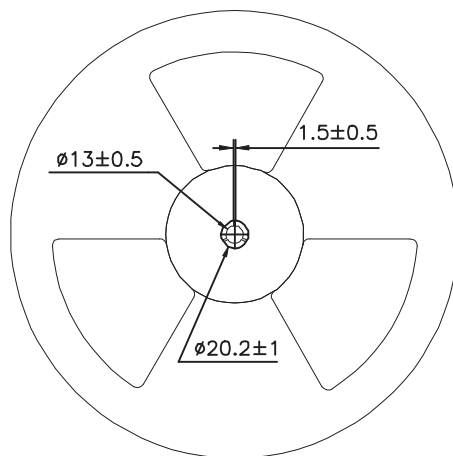
Direction



TL

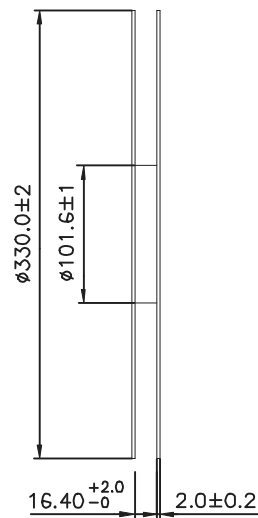
TR

Reel



Scale 1:5

Material : PVC



Packing:1000pcs/reel