

**DIP4, DC Input, Photo Transistor Coupler**

**Description**

I I 9- , h g h X Wc Vc V h c g/g Y  
 c Y Y Vh gl X h XVn  
 X Y Vh X c VcVg g/ch h g  
 Y X g c V Vh X9 E) VX V I Y g c  
 VY g c ch  
 L g Wh X VcVgY W Yh g X g  
 I 9- , h g h g kY h h VW h V c  
 V g

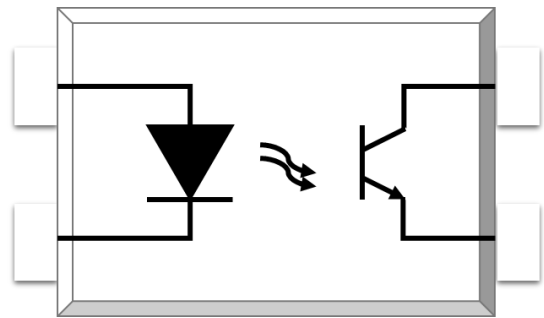
**Features**

= h V c %%% B  
 8l mW n V k V W h g' g  
 c g V c  
 98 c I g/ch h g  
 D g/ c g/ g g/c 8  
 % 8  
 : 8= X VcX  
 =V c g  
 B AXVhh  
 V gn g kVh  
 A A , ,  
 9: : C+% ), □ 9: %- )  
 8 8 ) )( -- -

**Applications**

- I X Y I gh h
- Eg g/ VW X c g gh
- = h YV VcX h
- D X f c

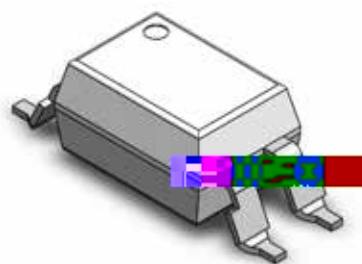
**SCHEMATIC**



**PIN DEFINITION**

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

**PACKAGE OUTLINE**



**DIP4, DC Input, Photo Transistor Coupler**

ABSOLUTE MAXIMUM RATINGS					
E	B:I:	NB DA	A:	CI	CDI:
CE I					
g VgY8 gg c			+%		
E V	g VgY8 gg c	E			
k gh V			+		
c	E I g9 hh V c	E	%%	L	
D I E I					
8	X g : g V	8: D	(		
:	g 8 X g V	: 8D	,		
8	X g8 gg c	8	%		
D	E I g9 hh V c	ED	%	L	
8DBBDC					
I	VE I g9 hh V c	E	%%	L	
h	V c V	h	%%%	g h	
D	gV c I gV g	I g	s %	8	
	gV I gV g	I h	s	8	
Y	gc I gV g	I h	+%	8	

std 7 722 r rd! 722 d d  
 std 4 7 std! 02 22

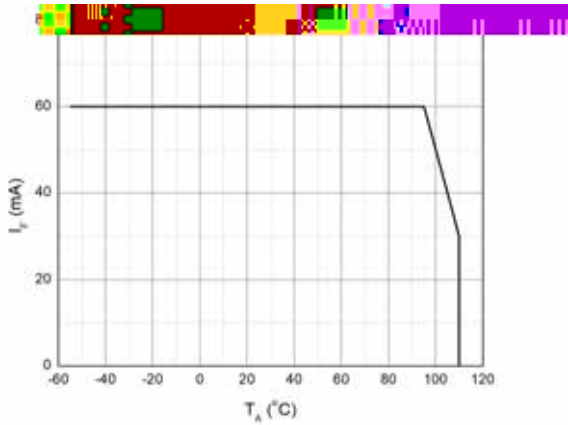
**DIP4, DC Input, Photo Transistor Coupler**

**ELECTRICAL OPTICAL CHARACTERISTICS at Ta=25°C**

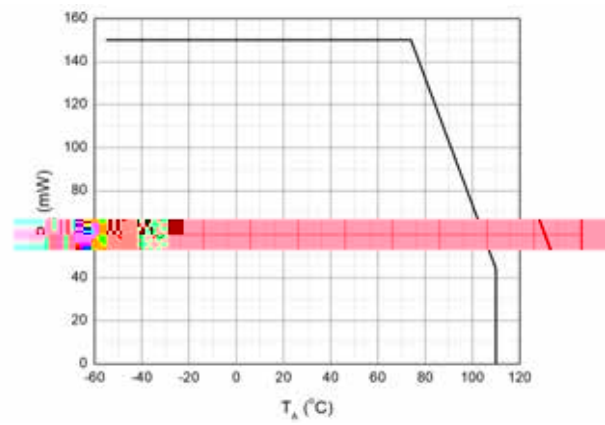
E	B:I:	NB DA	B C	INE	B M	CI	I: I 8DC9 I DC	CDI:
CE I								

**CHARACTERISTIC CURVES**

**Fig.1 Forward Current vs. Ambient Temperature**

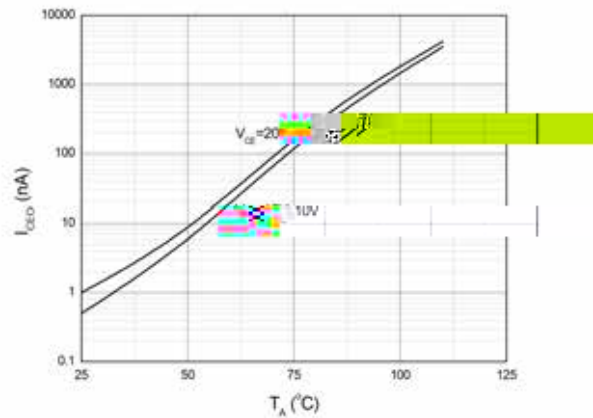


**Fig.2 Collector Power Dissipation vs. Ambient Temperature**



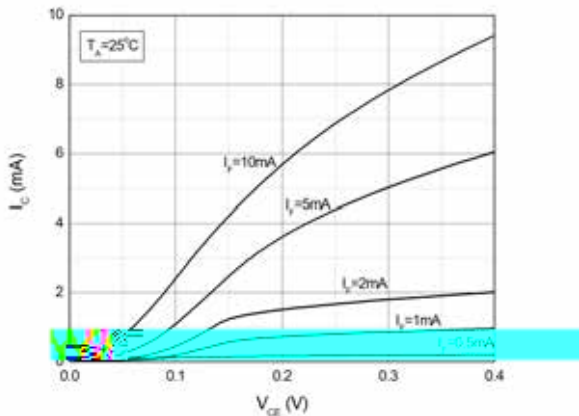
**Fig.3 Forward Current vs. Forward Voltage**

**Fig.4 Collector Dark Current vs. Ambient Temperature**



**Fig.5 Collector Current vs. Collector-emitter Voltage**

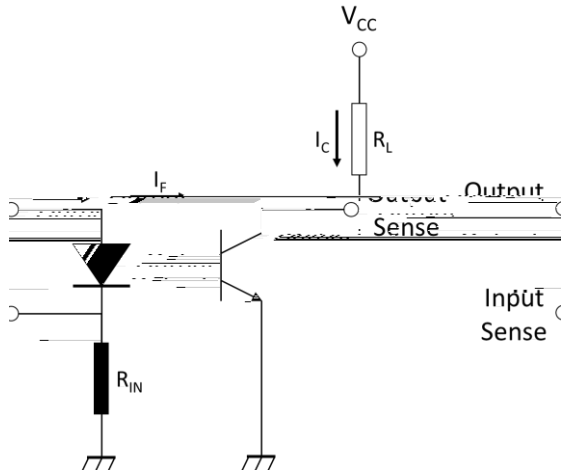
**Fig.6 Collector Current vs. Collector-emitter Voltage**



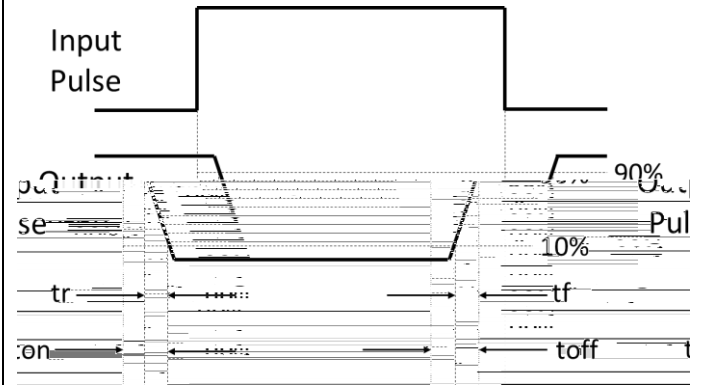
# ***TD817 Series***

**TEST CIRCUITS**

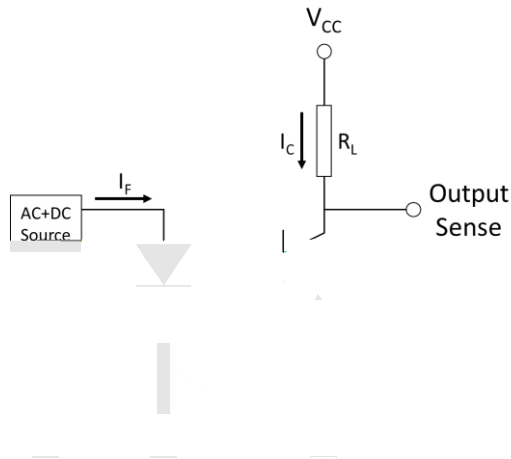
**Fig.12 Test Circuits of Response Time**



**Fig.13 Curves of Response Time**



**Fig.14 Test Circuits of Frequency Response**



**DIP4, DC Input, Photo Transistor Coupler**

**PACKAGE DIMENSIONS** Dimensions in mm unless otherwise stated)

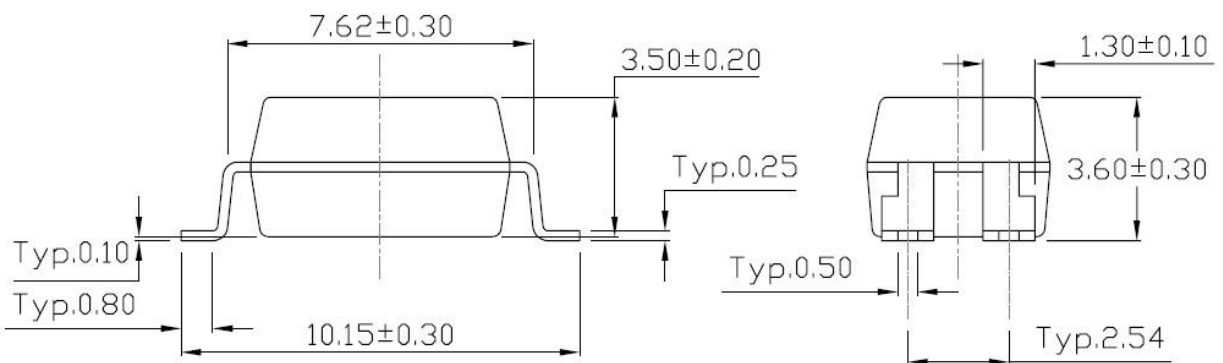
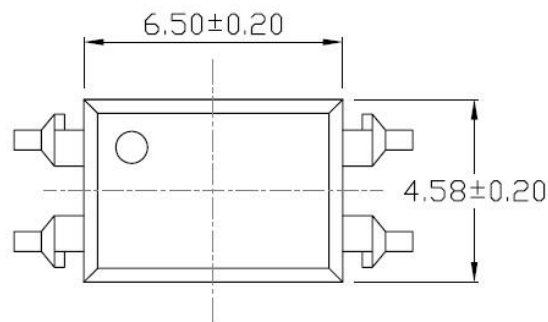
**Standard DIP – Through Hole (DIP Type)**

**Gullwing (400mil) Lead Forming – Through Hole (M Type)**

**DIP4, DC Input, Photo Transistor Coupler**

**PACKAGE DIMENSIONS** Dimensions in mm unless otherwise stated)

**Surface Mount Lead Forming (S Type)**

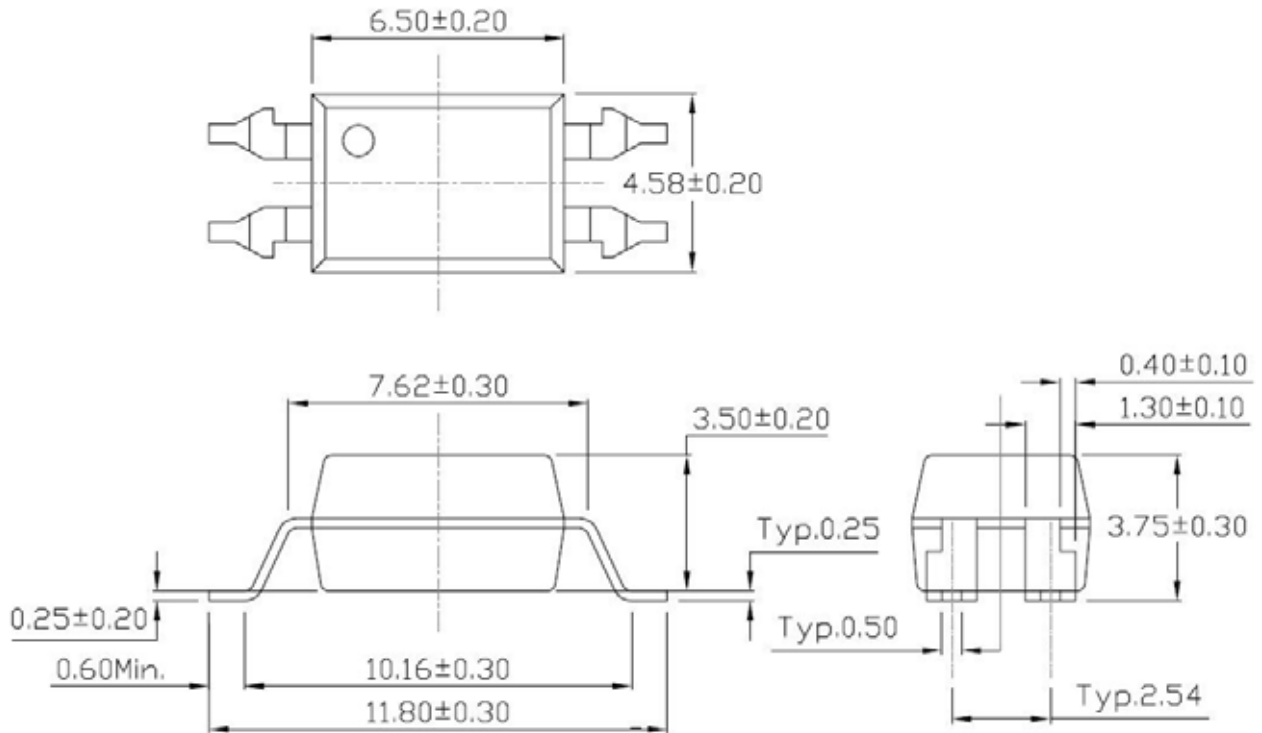




**DIP4, DC Input, Photo Transistor Coupler**

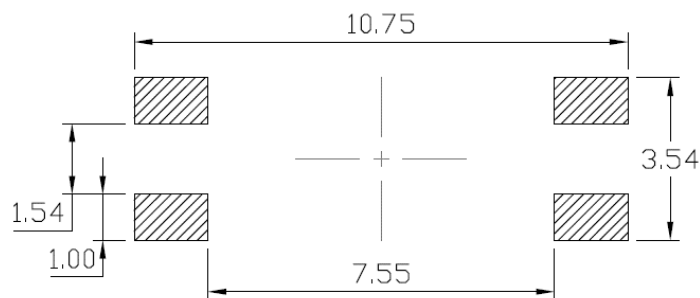
**PACKAGE DIMENSIONS** Dimensions in mm unless otherwise stated)

**Surface Mount (Gullwing) Lead Forming (SLM Type)**

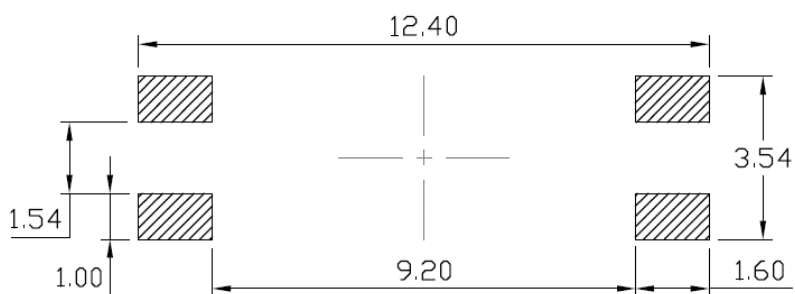


**RECOMMENDED SOLDER MASK** Dimensions in mm unless otherwise stated)

**Surface Mount Lead Forming & Surface Mount (Low Profile) Lead Forming**



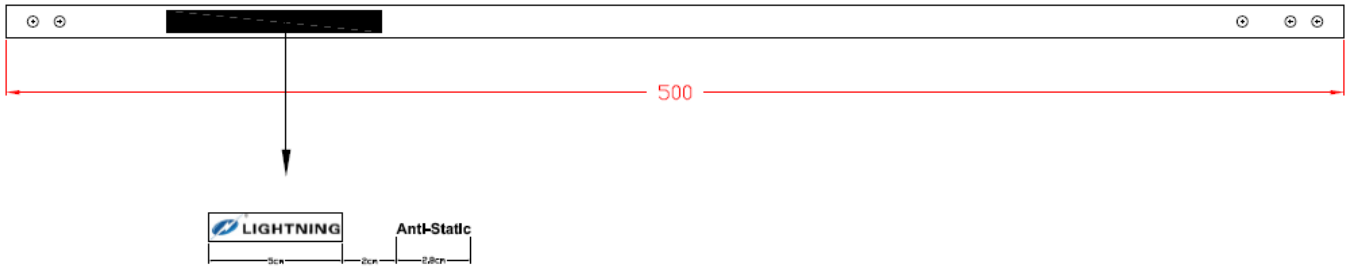
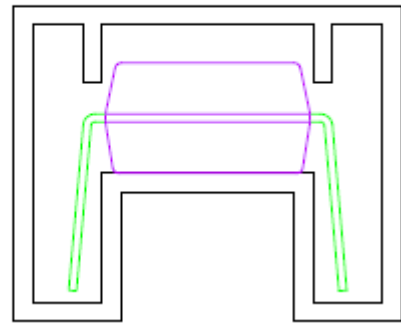
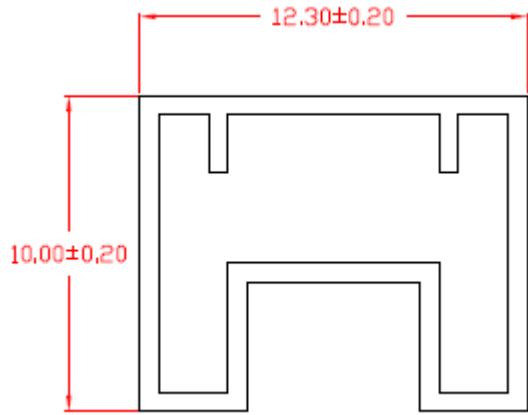
**Surface Mount (Gullwing) Lead Forming**



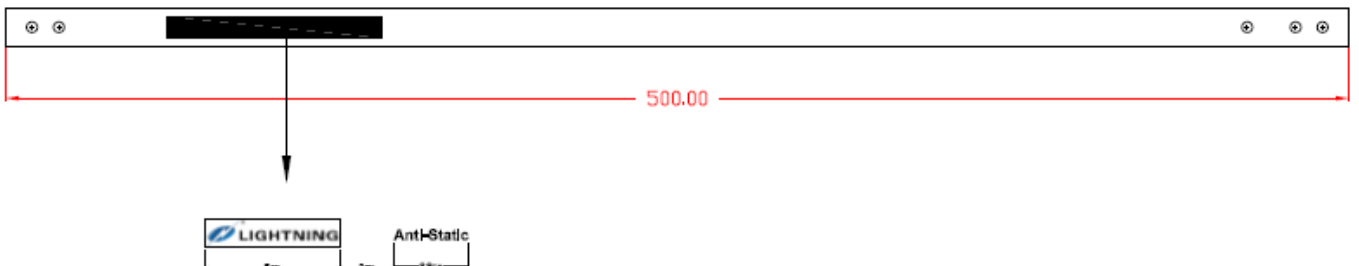
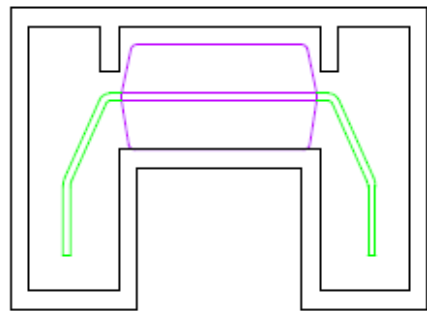
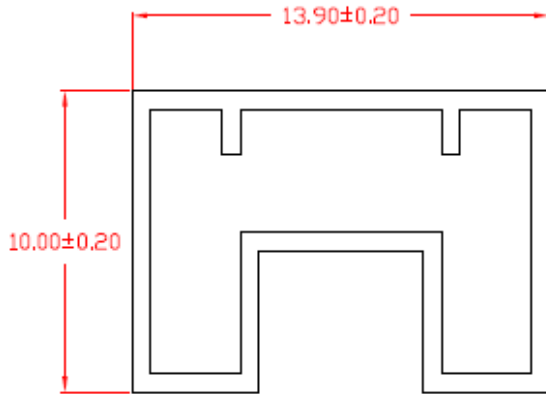
**DIP4, DC Input, Photo Transistor Coupler**

**TUBE SPECIFICATIONS** Dimensions in mm unless otherwise stated)

**Standard DIP**



**Option M**



## DIP4, DC Input, Photo Transistor Coupler

### BOX SPECIFICATIONS (Tube Type)

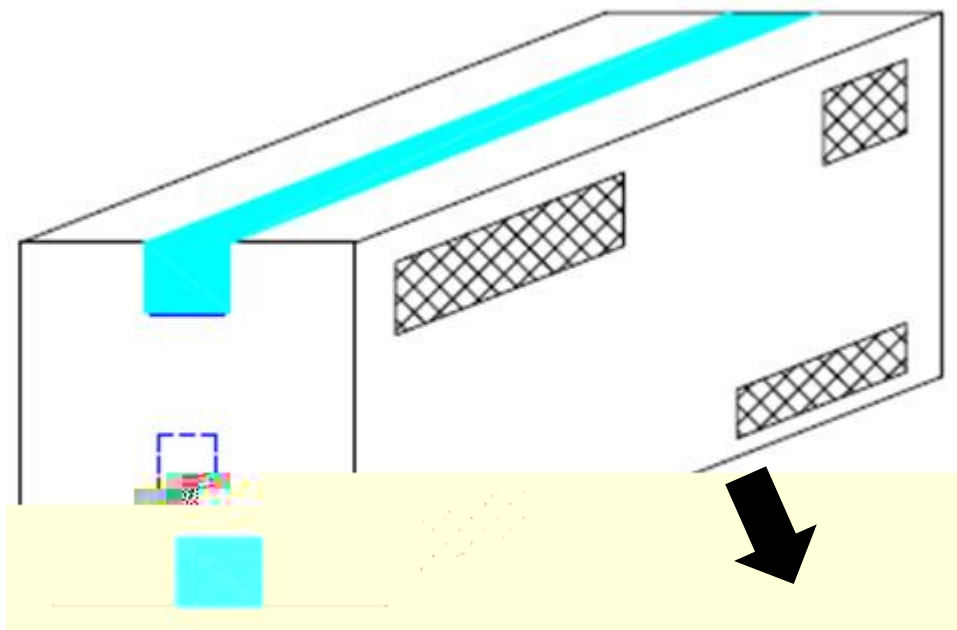
#### Inner Box

Label



141 723 03

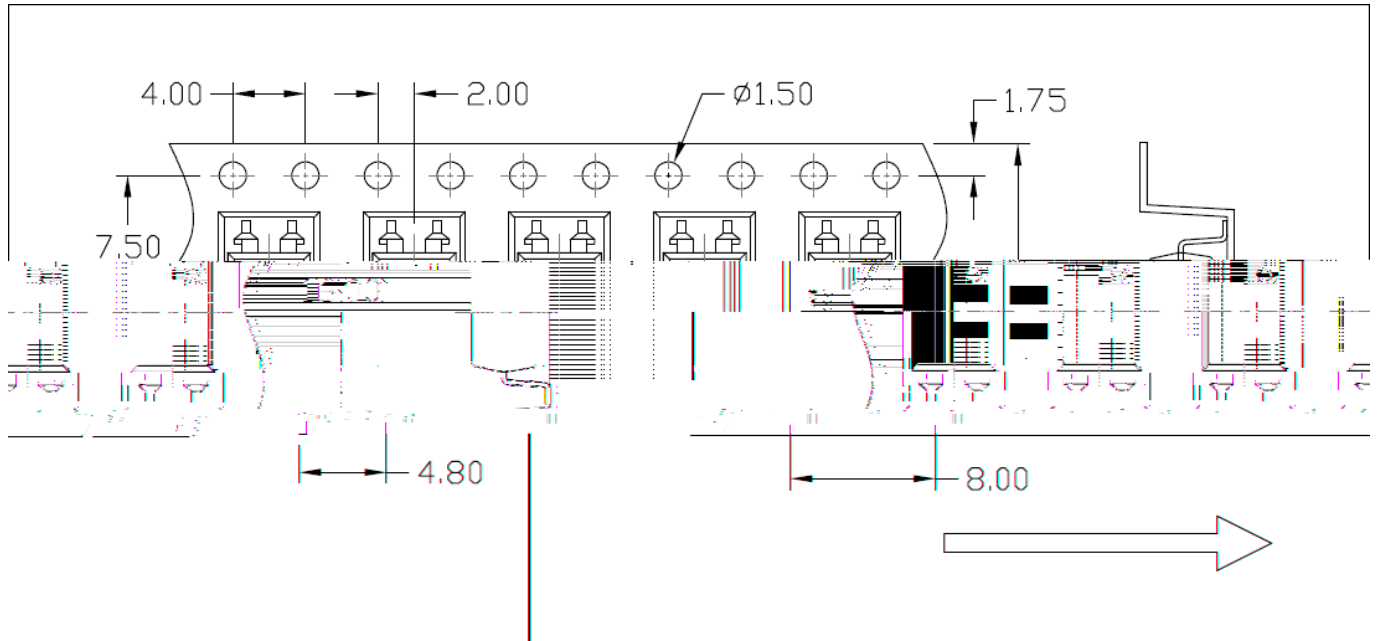
#### Outer Box



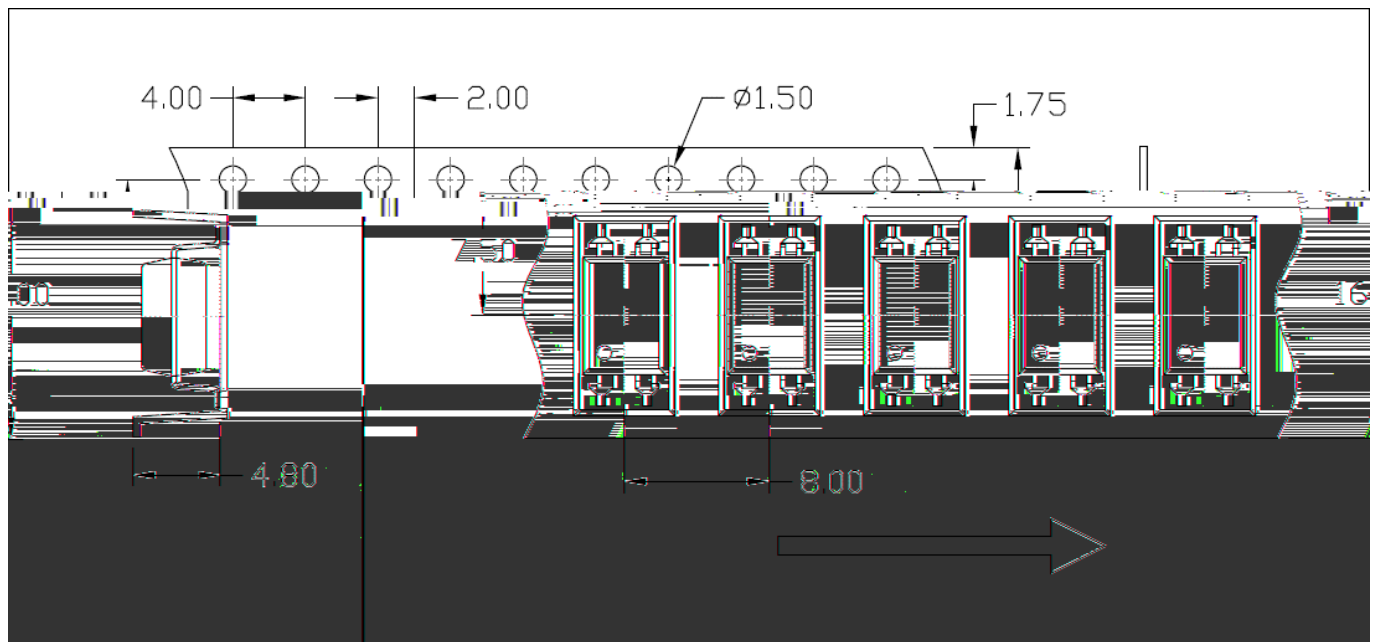
191 491 411

**CARRIER TAPE SPECIFICATIONS** Dimensions in mm unless otherwise stated)

**Option S(T1) & SL(T1)**



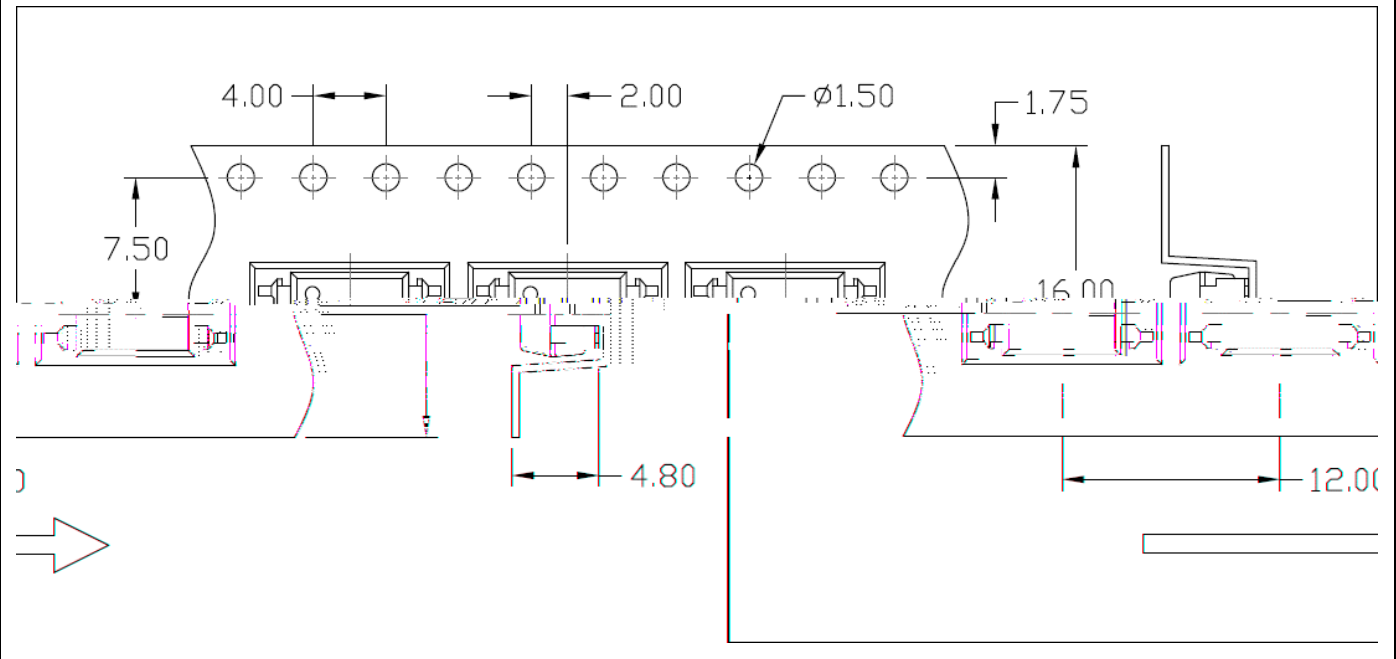
**Option S(T2) & SL(T2)**



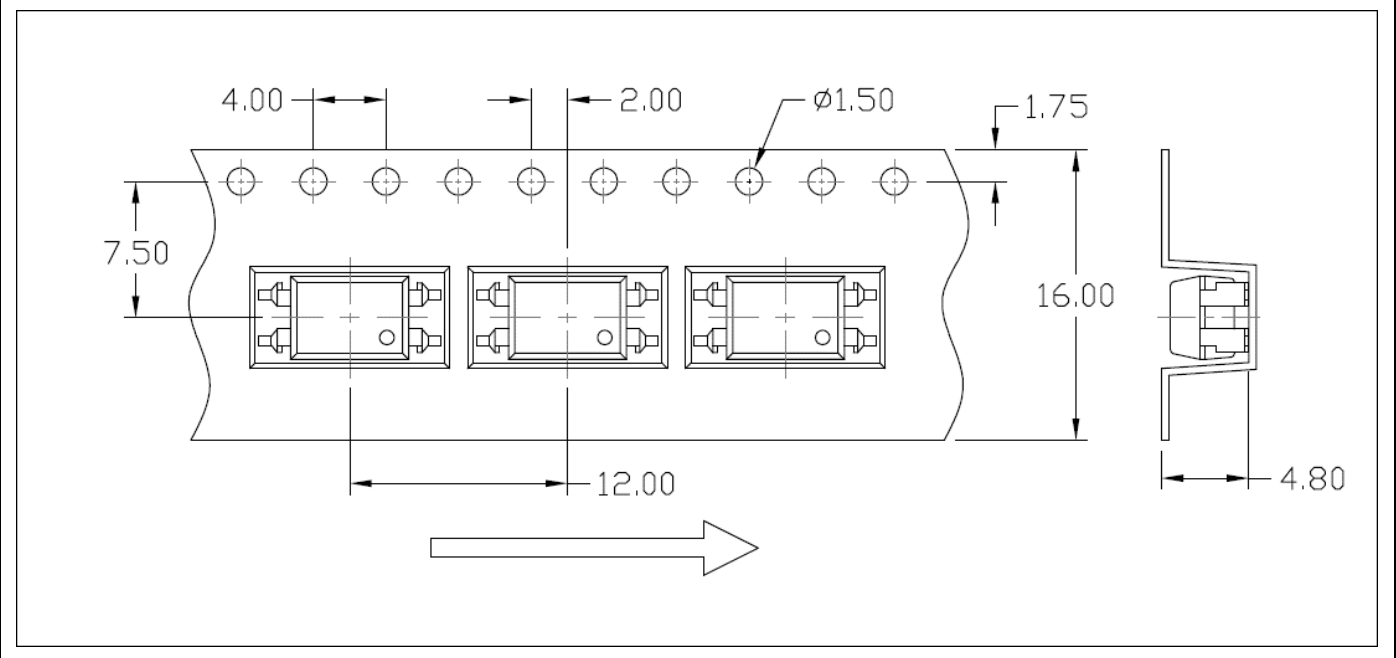
**DIP4, DC Input, Photo Transistor Coupler**

**CARRIER TAPE SPECIFICATIONS** Dimensions in mm unless otherwise stated)

**Option S(T3) & SL(T3)**

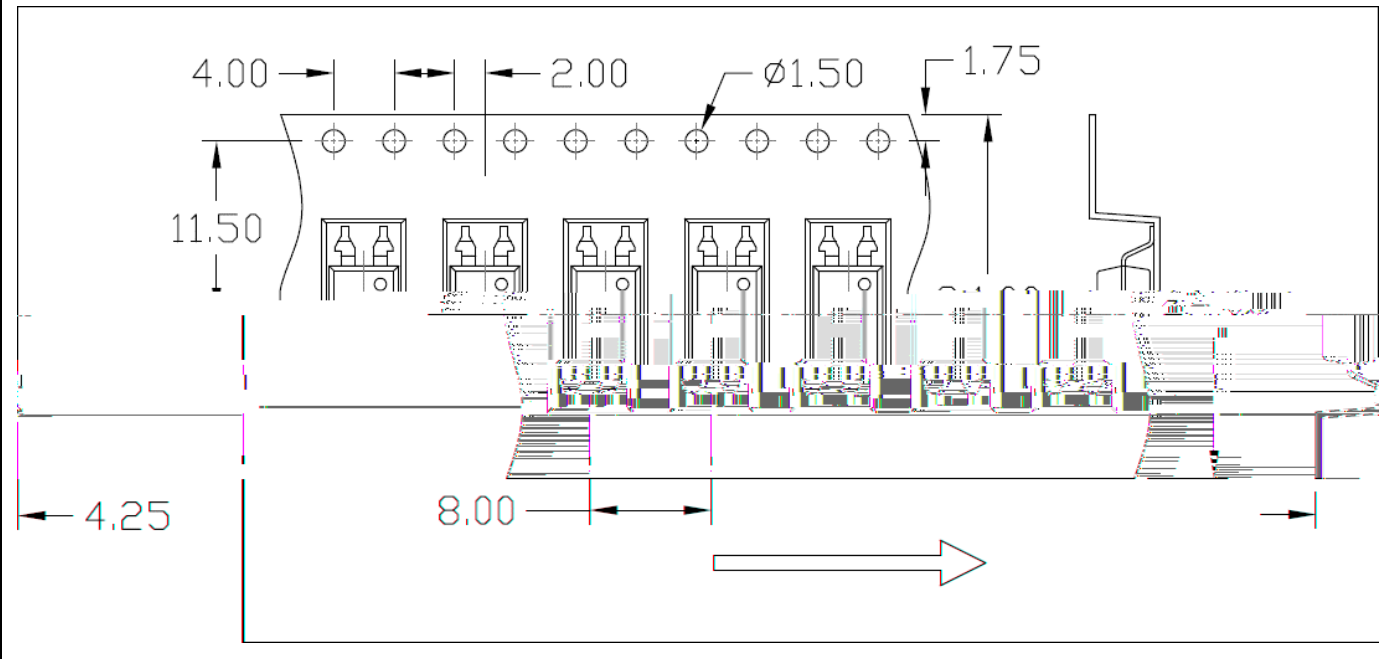


**Option S(T4) & SL(T4)**

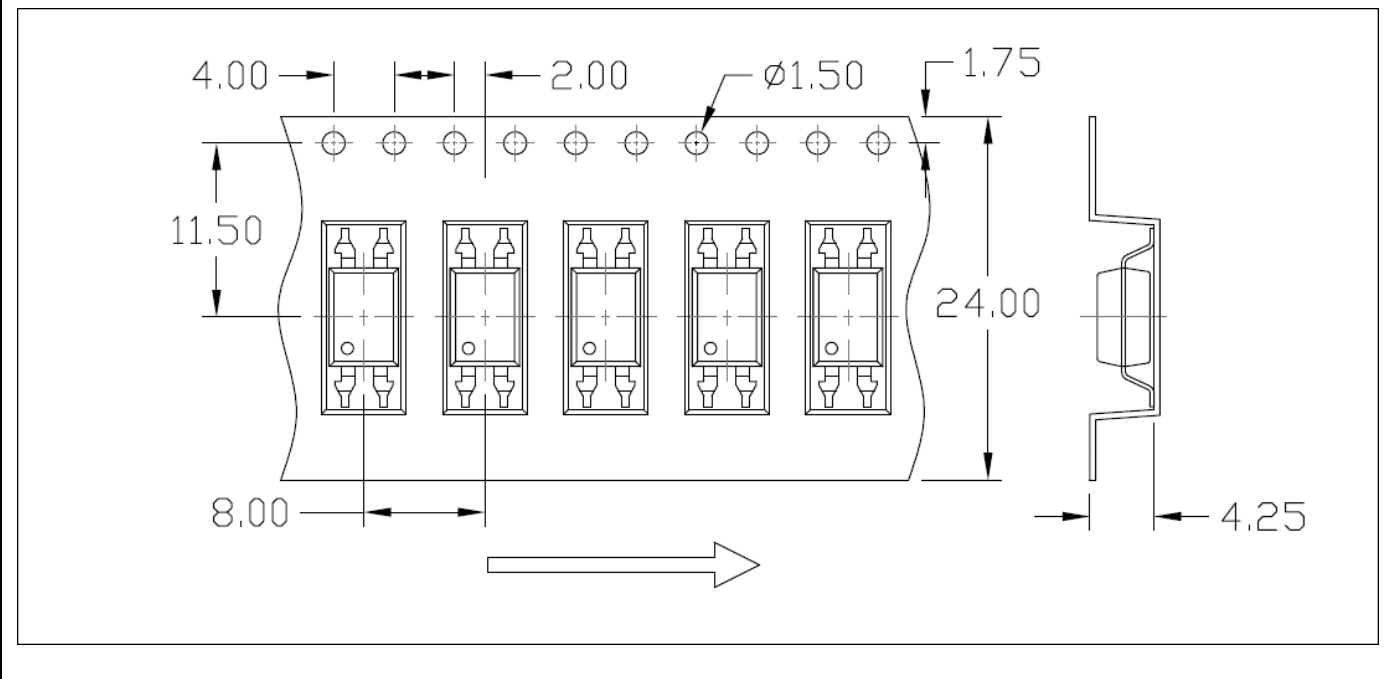


**CARRIER TAPE SPECIFICATIONS** Dimensions in mm unless otherwise stated)

**Option SLM(T1)**



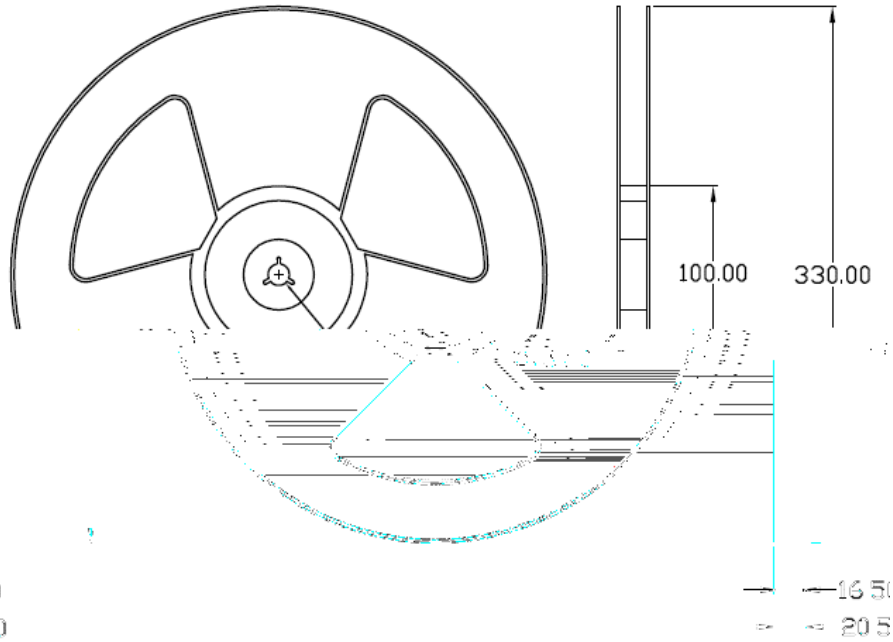
**Option SLM(T2)**



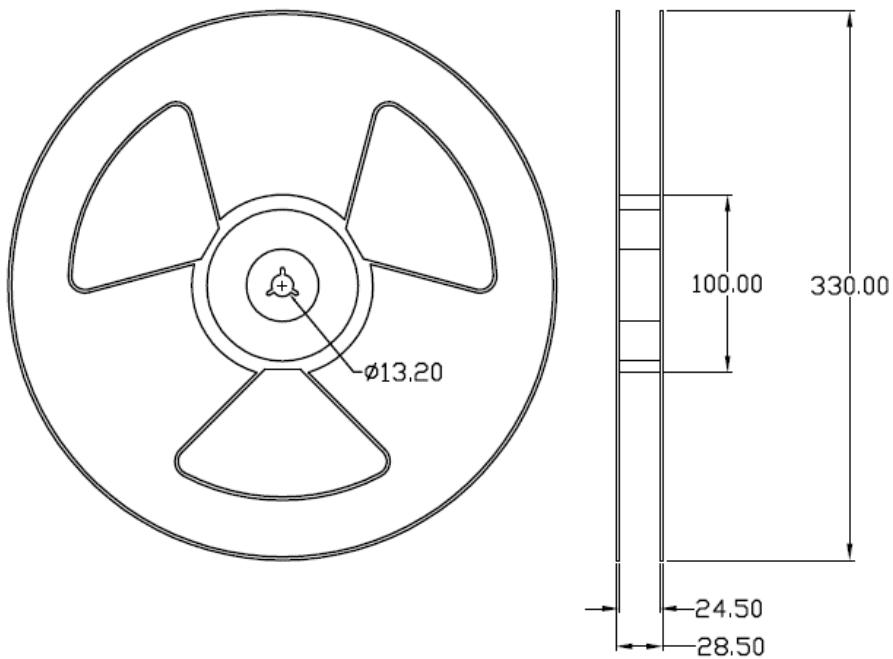
**DIP4, DC Input, Photo Transistor Coupler**

**REEL SPECIFICATIONS** Dimensions in mm unless otherwise stated)

**Option S & Option SL**



**Option SLM**

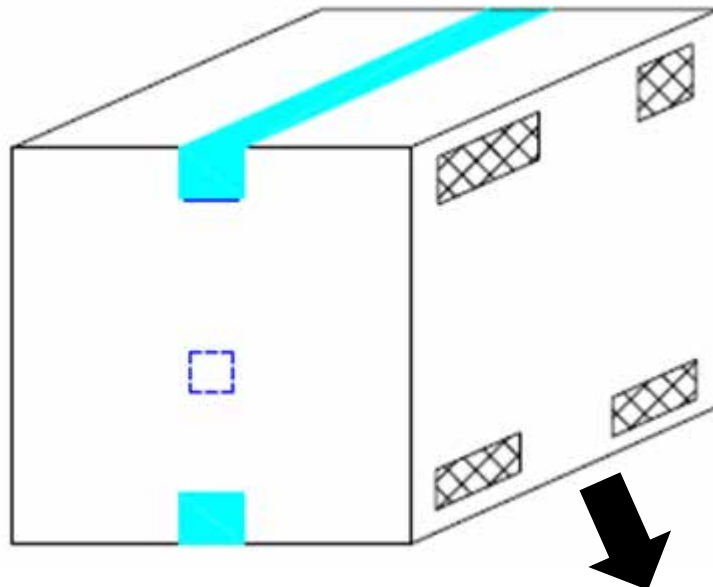


**BOX SPECIFICATIONS (Reel Type)**

**Inner Box**

92 92 25

**Outer Box**



01 94 94



**DIP4, DC Input, Photo Transistor Coupler**

**ORDERING AND MARKING INFORMATION**

**MARKING INFORMATION**

**TD** : Company Abbr.  
**F** : Leadframe Option  
**817** : Part Number  
**X** : CTR Rank  
**V** : VDE Option  
**Y** : Fiscal Year  
**A** : Manufacturing Code  
**WW** : Work Week

**ORDERING INFORMATION**

**LABEL INFORMATION**

**TD817X(Y)(Z)-FGV**

I 9 8 Vcn Wg  
 - , EVg C Wg  
 M Vc □ 8 9 : gC c  
 N A Y g D c □ B A A B C c  
 O I V VcY D c □ I I ( I )  
 A VYgV D c □ g c C c 8 g  
 g c  
 9 : D c □ gC c

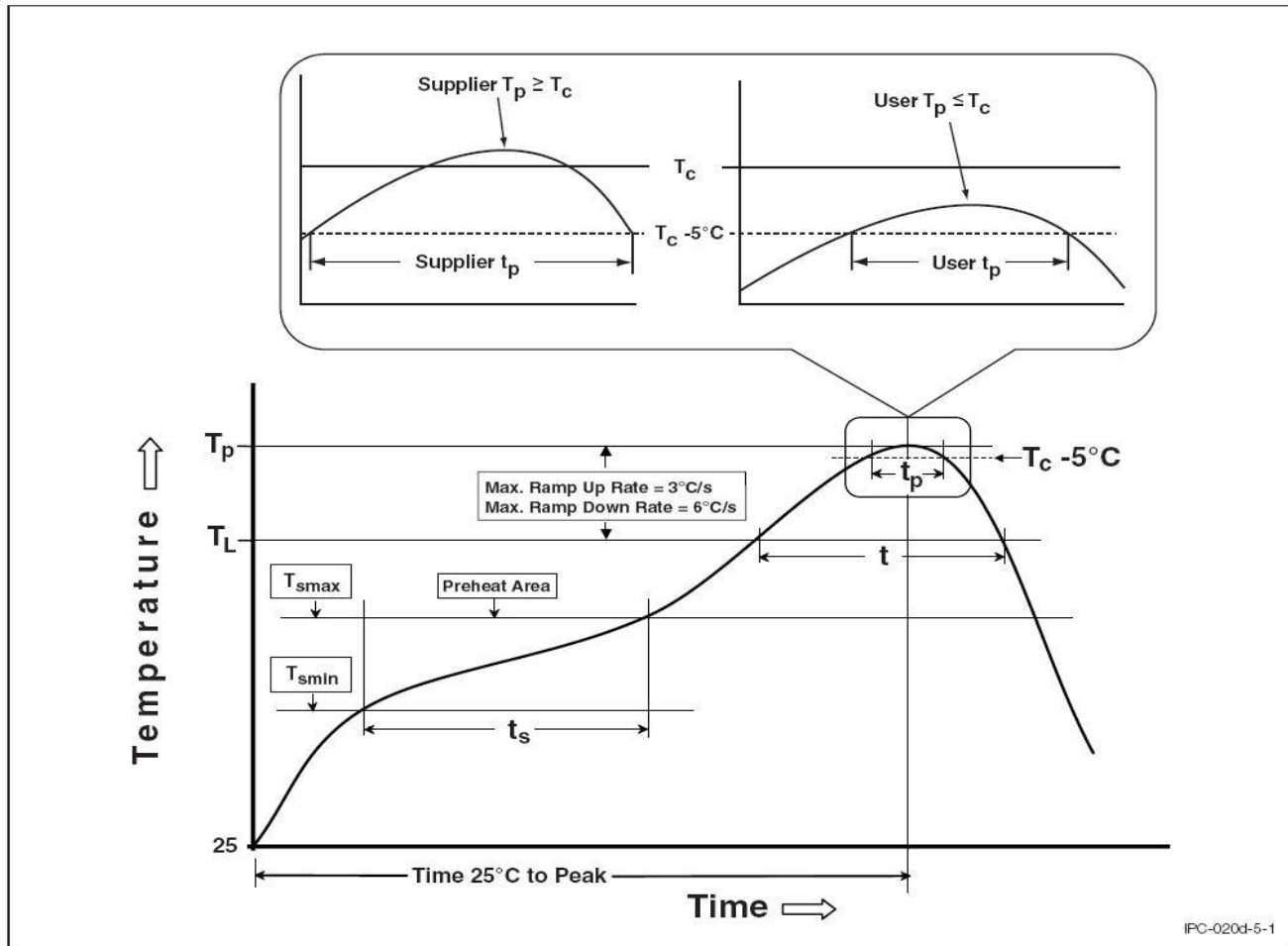
**Packing Quantity**

Option	Quantity	Quantity – Inner box	Quantity – Outer box
C c	%% c h l W	( l Wh cc gWm	% cc gWmD gWm2 ( c h
B	%% c h l W	( l Wh cc gWm	% cc gWmD gWm2 ( c h
□	%% c h	( h cc gWm	cc gWmD gWm2 c h

**DIP4, DC Input, Photo Transistor Coupler**

**REFLOW INFORMATION**

**REFLOW PROFILE**

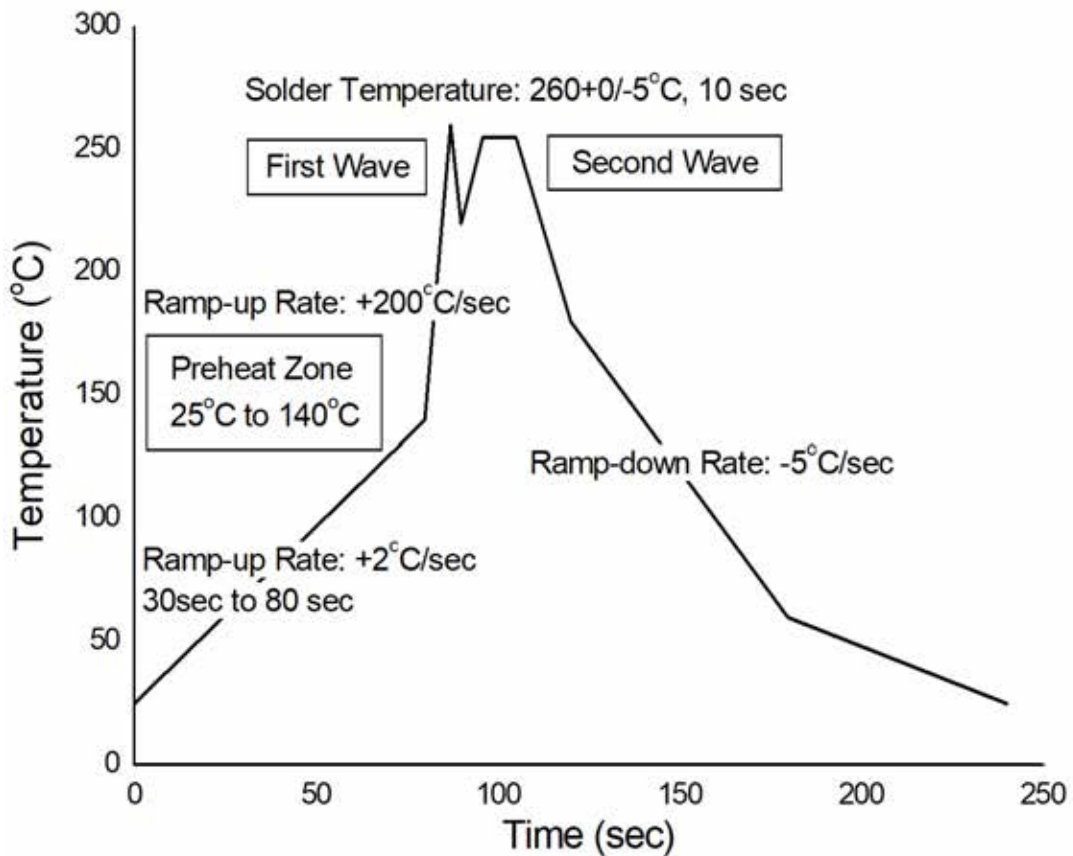


Profile Feature	Sn-Pb Assembly Profile	Pb-Free Assembly Profile
I gV g B c ih c	%%	%8
I gV g B Vm ih Vm	%	%%8
I ih g ih c Ih Vm	+% %h X cYh	+% %h X cYh
V V A E	( 8 h X cY Vm	( 8 h X cY Vm
Af Y hl gV g A	-( 8	, 8
I A B Vc Vc Y Wk A	+% %h X cYh	+% %h X cYh
E V Yn EVX V I gV g	( 8 %8 8	+%8 %8 8
I A E I c 8 +%8	%h X cYh	( %h X cYh
V Y I c V A E IA	+ 8 h X cY Vm	+ 8 h X cY Vm
I 8 E V I gV g	+ c h Vm	- c h Vm

**DIP4, DC Input, Photo Transistor Coupler**

**TEMPERATURE PROFILE OF SOLDERING**

**WAVE SOLDERING (JESD22-A111 COMPLIANT)**



**HAND SOLDERING BY SOLDERING IRON**

Y gc l	gV g	( - % % 8
Y gc l		( h X Vm

- d st dr clal ft r d d clalch z r clal ft d st ch
- str clal d st z st dd st dr d r clal ft

**TD817 Series**

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**DIP4, DC Input, Photo Transistor Coupler**