



TD101X Series

LSOP4, DC Input, Photo Transistor Coupler

The TD101X series combine an AlGaAs infrared emitting diode as the emitter which is optically coupled to a silicon planar phototransistor detector in a plastic LSOP4 package with the robust coplanar double mold structure. TD101X series provide the most stable isolation feature.

High isolation (1000 V) +S

Temperature stability available see order information

DC input with transistor output

Operating temperature range: (-40°C to 110°C)

Output current 10 mA, RoHS compliance

UL class 1

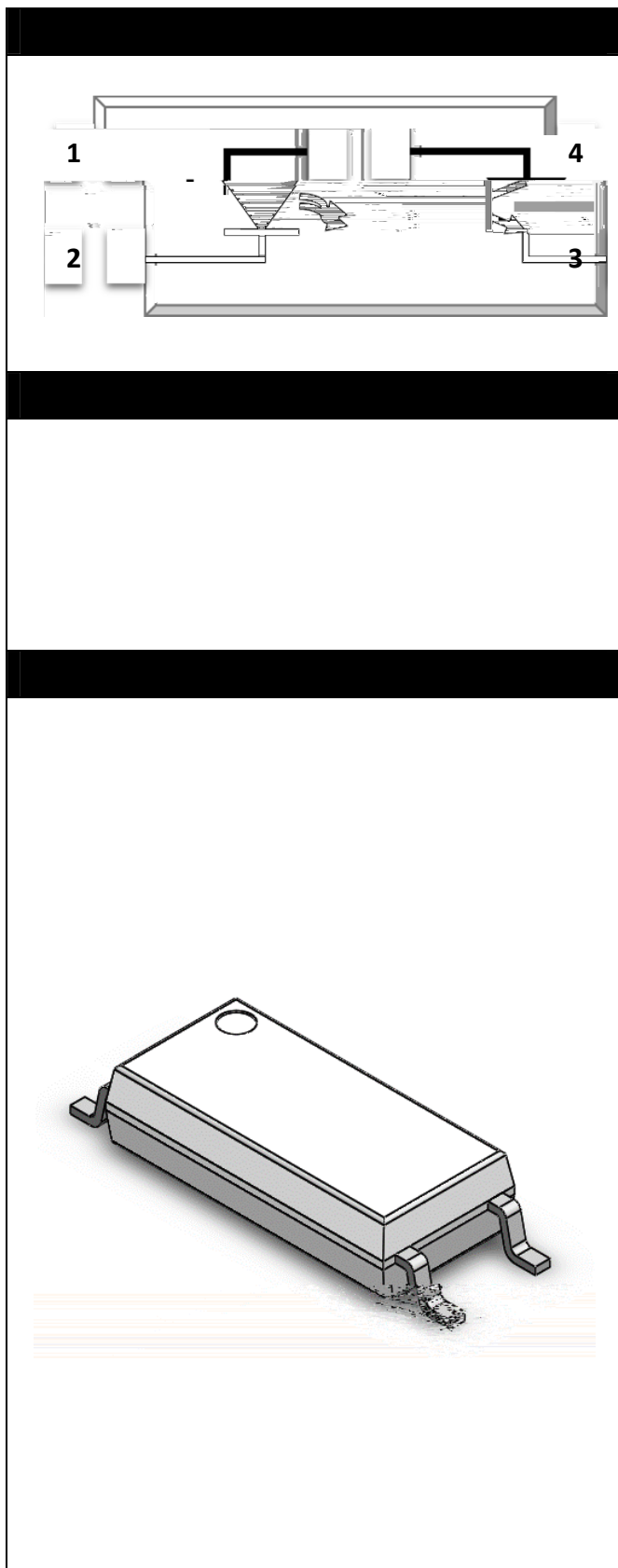
Regulatory Approvals

2L . 2L1(33

)D1 . 14503!3.(. (6)D1077!. (8

, 9 , : G ; !< !=#1% G ; 77<7

- Switch mode power supplies
- Programmable controllers
- Household appliances
- Office equipment





TD101X Series

LSOP4, DC Input, Photo Transistor Coupler

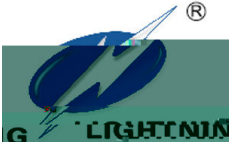
TD101X Series				
A * A+1T1 *	S@+ ; OL	)AL21	24AT	4OT1
A4 2T				
Forward Current	I_{FB}	50	mA	
Reverse Current	I_{RB}	1	A	1
Reverse Voltage	V_R	5	V	
Input Power Dissipation	P_A	100	mW	
O2T 2T				
Collector-Emitter Voltage	V_{CE10}	70	V	
Emitter-Collector Voltage	V_{EC10}	3	V	
Collector Current	I_C	10	mA	
Output Power Dissipation	P_O	10	mW	
, O+ +O4				
Total Power Dissipation	P_{tot}	10	mW	
Isolation Voltage	V_{iso}	1000	V rms	?
Operating Temperature	T_{opr}	-55 to 100	°C	
Storage Temperature	T_{stg}	-55 to 100	°C	
Soldering Temperature	T_{sol}	250	°C	



TD101X Series

LSOP4, DC Input, Photo Transistor Coupler

A * A + 1 T1 *							
S@+ ; OL	+A4#	T@ #	+AX#	24AT	T1ST , O4DATAO4	4OT1	
A4 2T							
Forward Voltage	V _B	.	1#!	1#5	)	I _B D(0mA	
Reverse Current	I _A *	.	.	10	EA	) *D5)	
Input Capacitance	C _{in}	.	=0	? (0	pB	) D0% fD1 " ' F	
O2T 2T							
Collector Current	I _{C10}	.	.	100	nA	) , 1D?0) % I _B D0	
Collector Emitter Saturation Voltage	V _{CE(sat)}	70	.	.	)	I _A , D0#1mA % I _B D0	
Collector Emitter Saturation Voltage	V _{CE(sat)}	3	.	.	)	I _{A1} D0#1mA % I _B D0	
T * A4SB1 * , ' A * A , T1 * ASTA , S							
Current Transfer Ratio	TD1010	I _C / I _B	=00	.	500	G	I _B D(mA%) , 1D()
	TD101(		(0	.	1(0		
	TD1015		100	.	=00		
	TD1013		70	.	150		
	TD1017		1=0	.	?50		
	TD101<		?00	.	!00		I _B D10mA%) , 1D()
	TD1011		50	.	=00		
	TD101?		5=	.	1?(
	TD101=		100	.	?00		
	TD101!		150	.	=?0		
	TD101?		??	.	.		
	TD101=		=!	.	.			I_{B}D1mA% ) , 1D( )
TD101!	(5	.	.				
Collector Emitter Saturation Voltage	V _{CE(sat)}	.	0#1	0#=	)	I _B D10mA% I _A , D1mA	
Isolation Resistance	R _{ISO}	10H1?	10H1!	.	I	D , (00) % !0 C 50G * # ' #	
Bloating Capacitance	C _{AO}	.	0#!	1	pB	) D0% fD1 + ' F	
Turn-off Frequency	f _{bc}	.	70	.	" ' F	) , 1D?) % I _A , D?mA * LD100 I % . =d ;	=
Rise Time	t _r	.	(	17	Es	) , 1D?) % I _A , D?mA	!
Fall Time	t _f	.	5	17	Es	* LD100 I	!

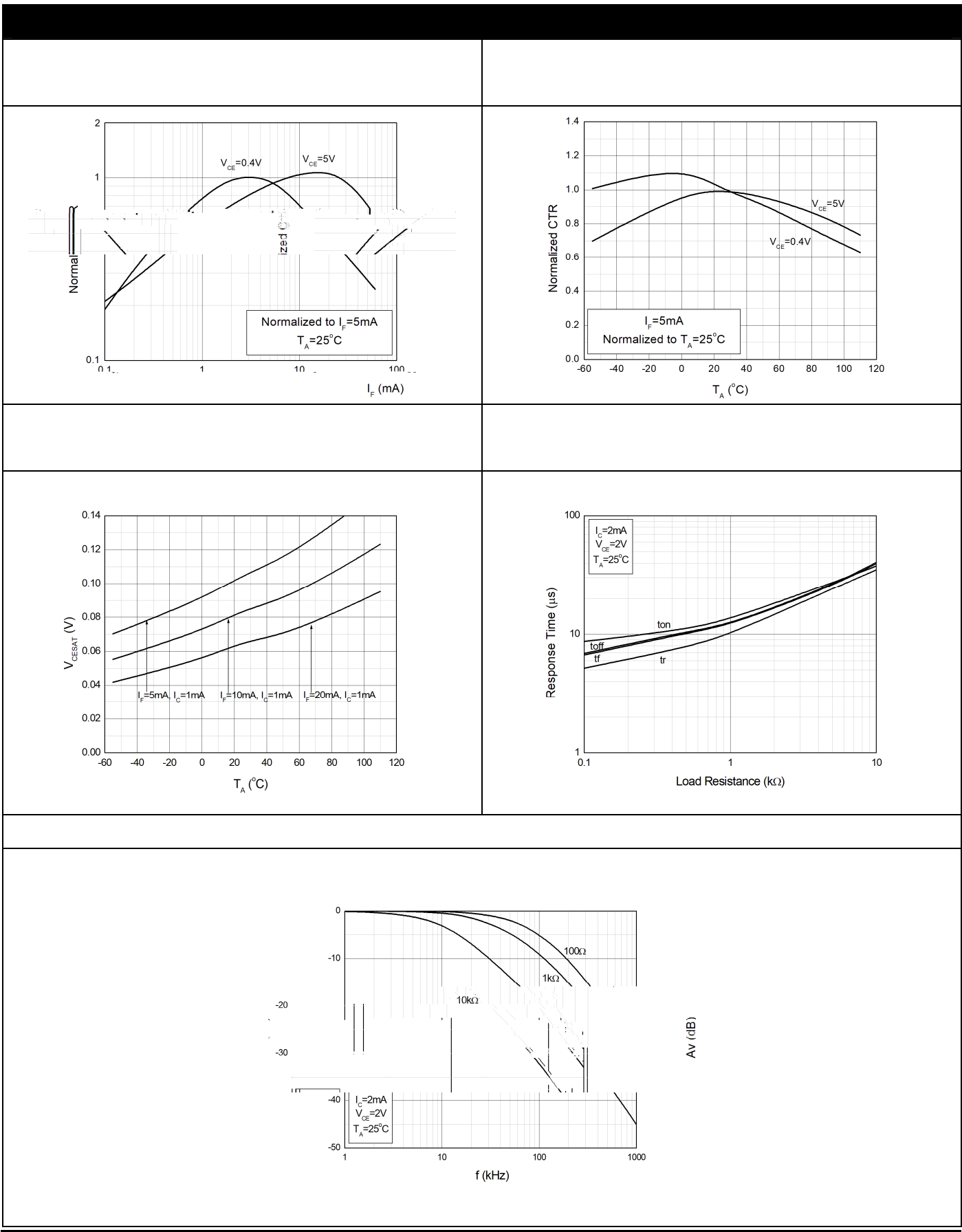


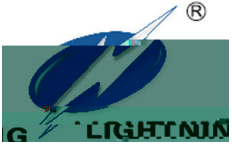
TD101X Series
LSOP4, DC Input, Photo Transistor Coupler



TD101X Series

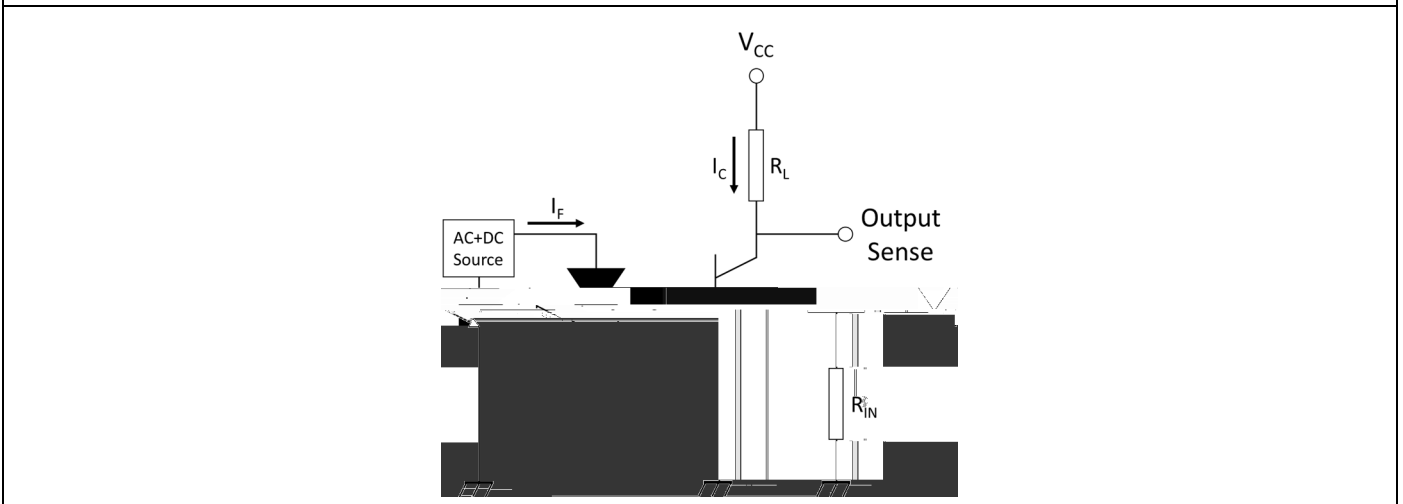
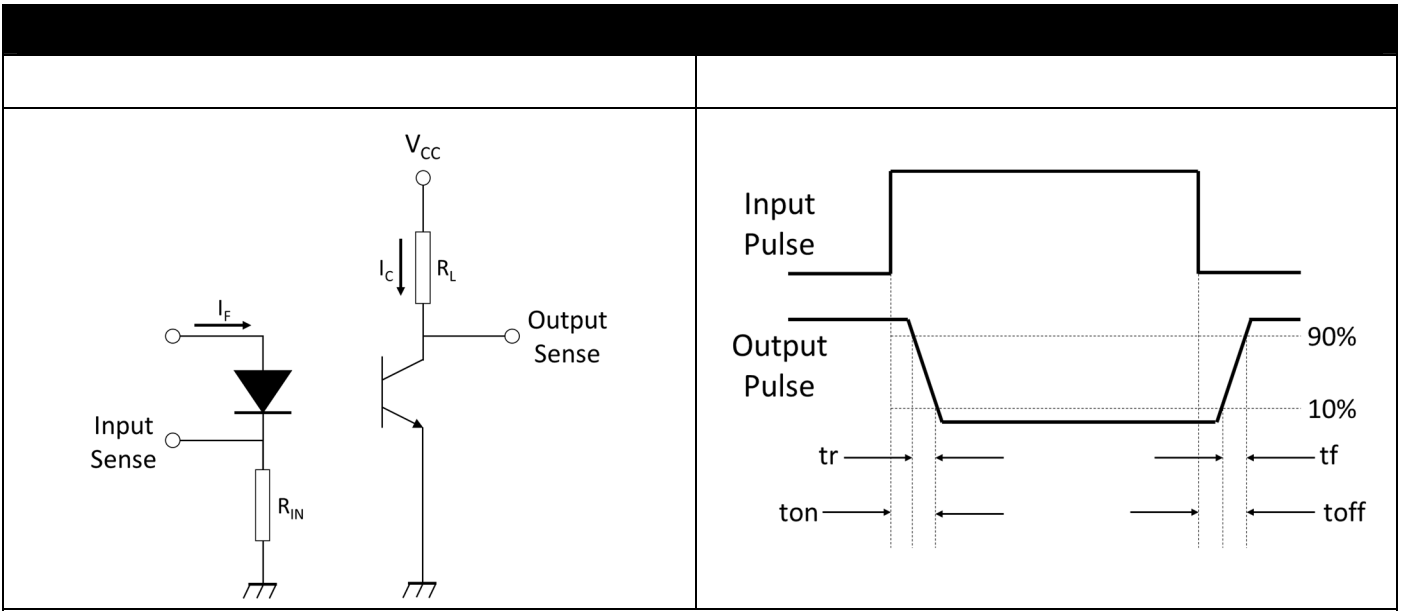
LSOP4, DC Input, Photo Transistor Coupler

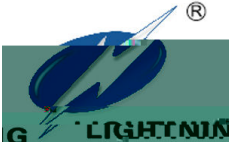




TD101X Series

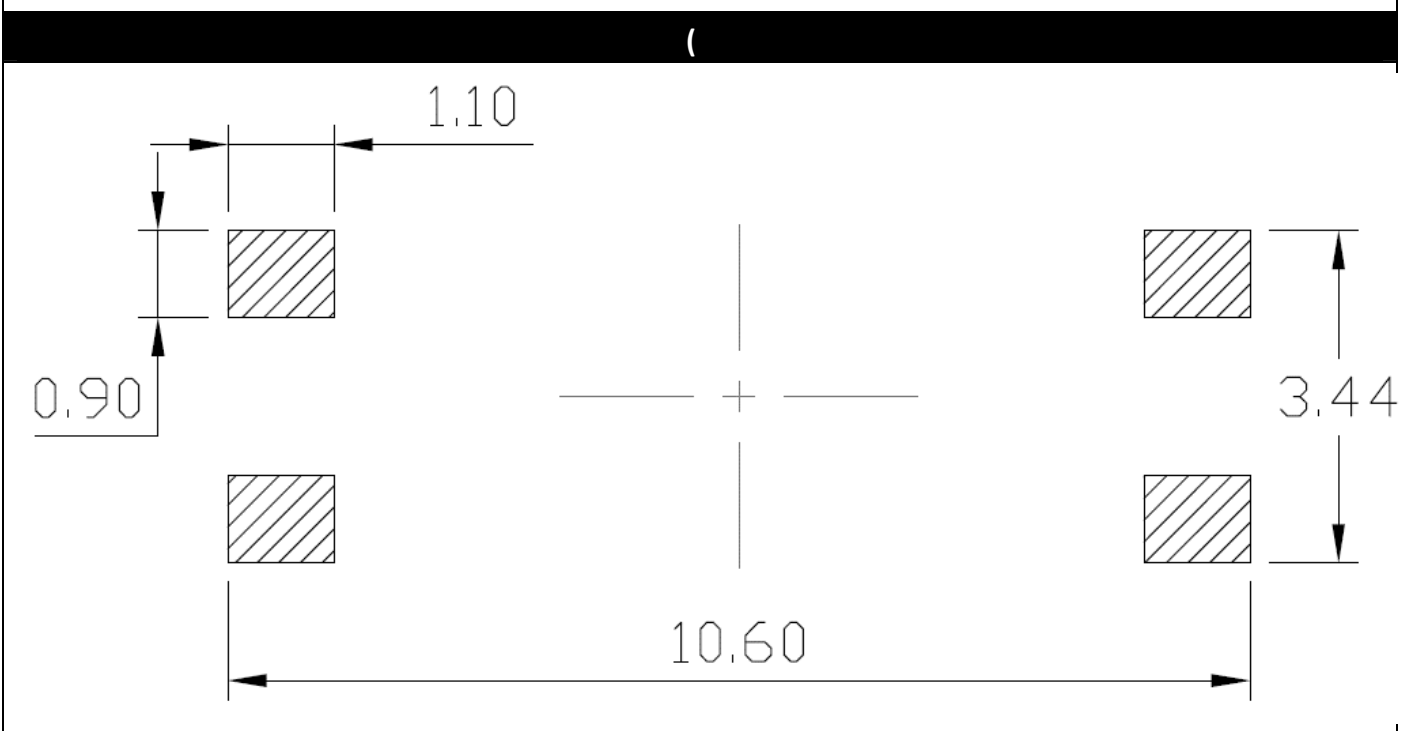
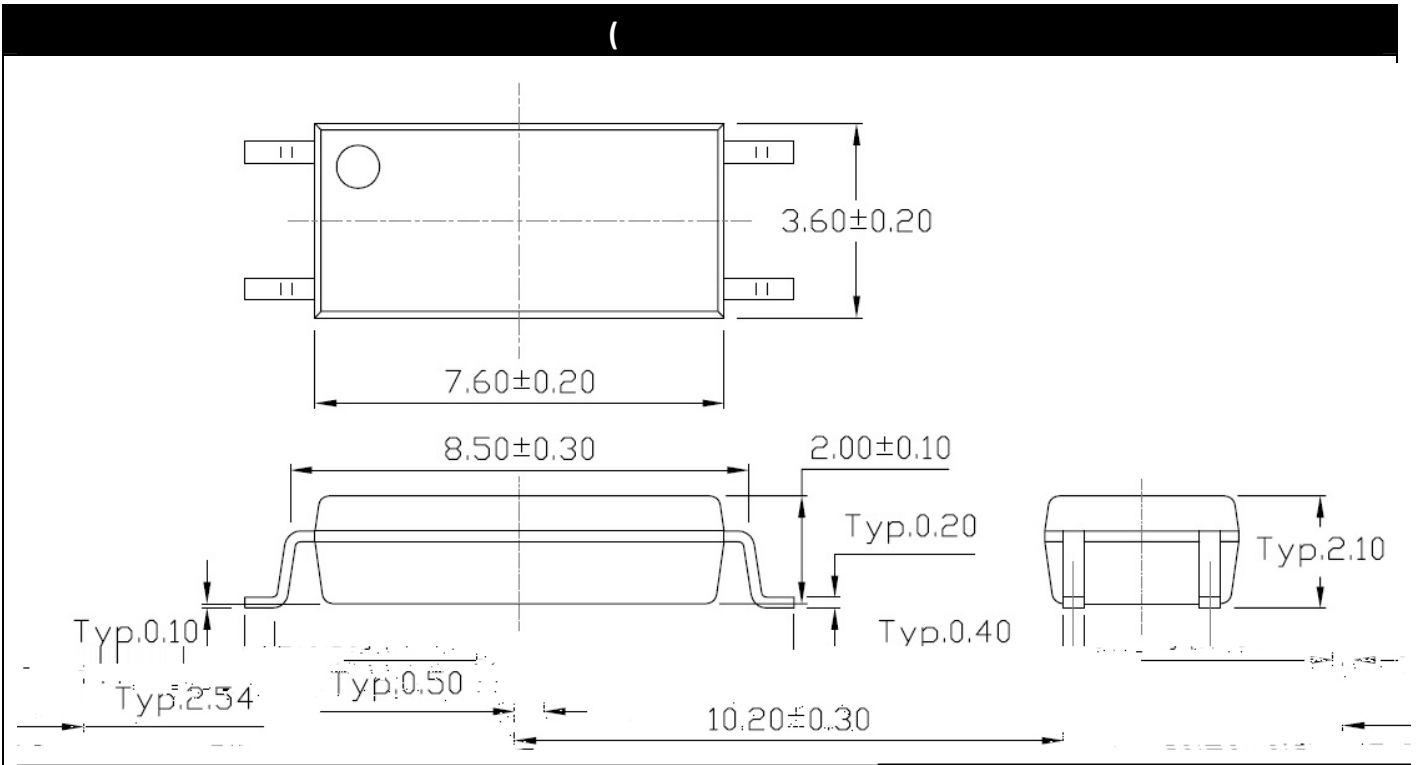
LSOP4, DC Input, Photo Transistor Coupler

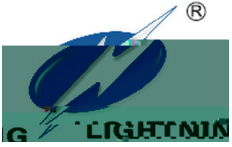




TD101X Series

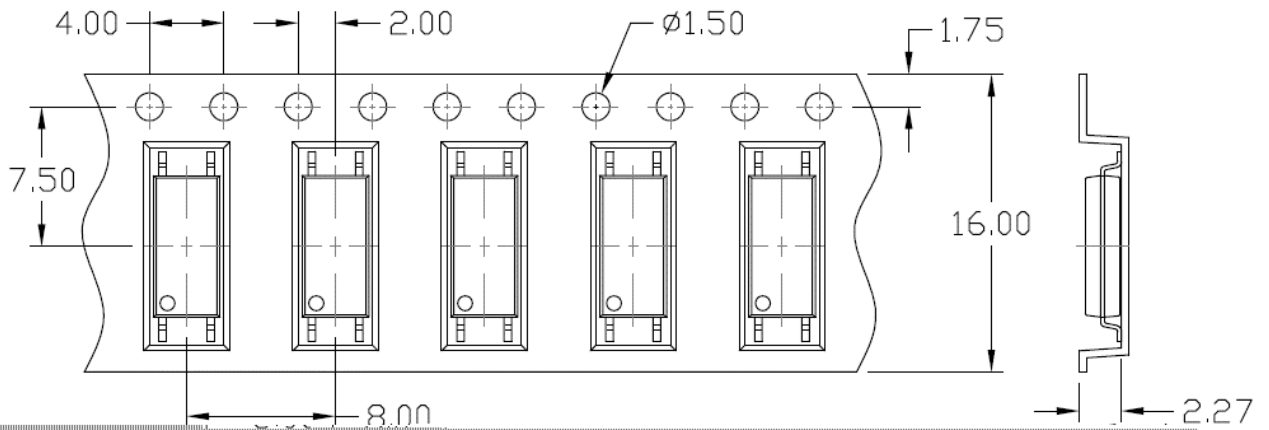
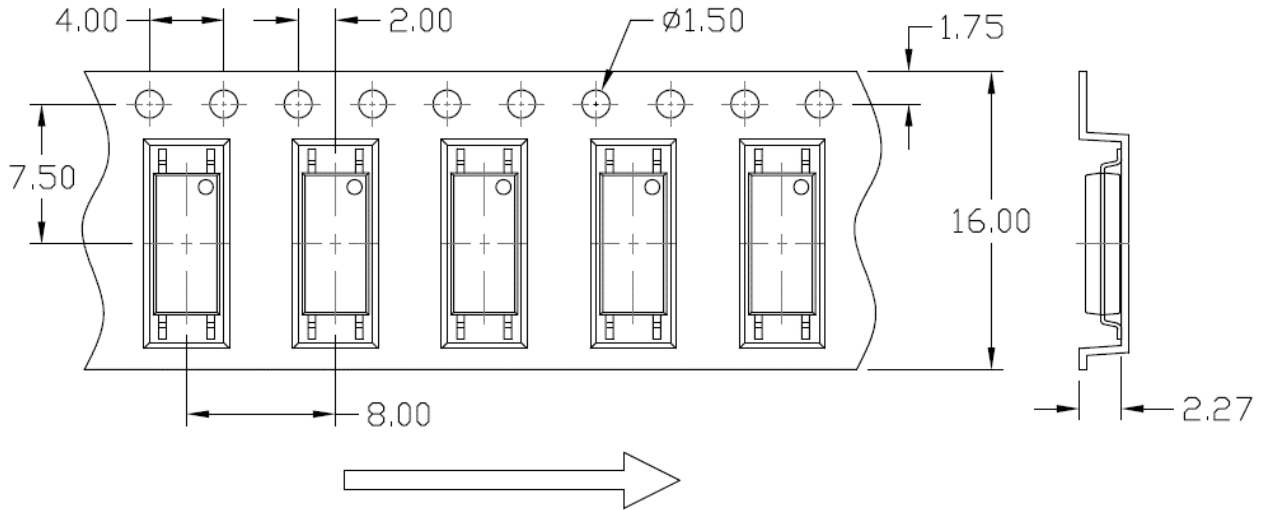
LSOP4, DC Input, Photo Transistor Coupler

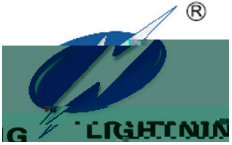




TD101X Series

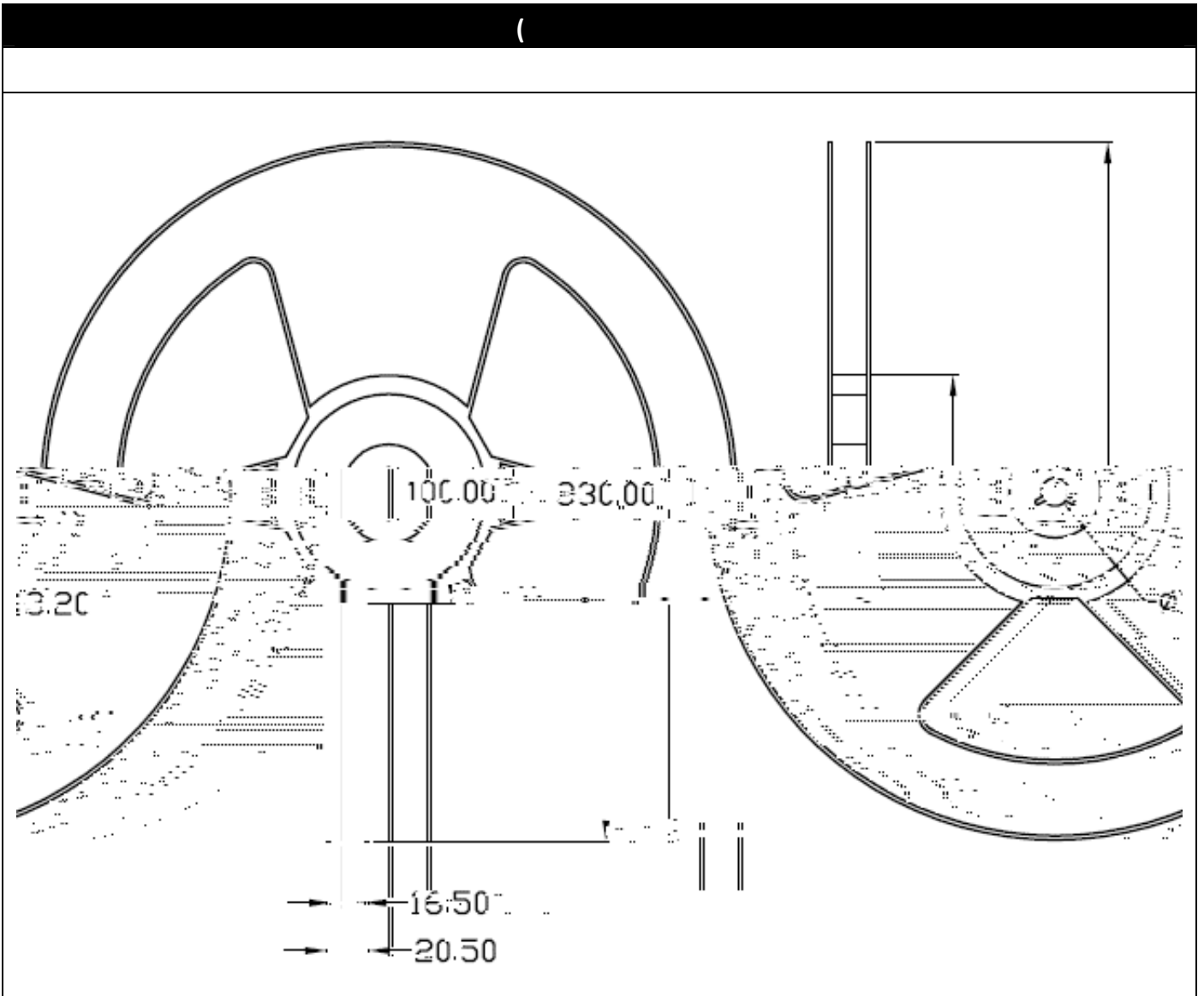
LSOP4, DC Input, Photo Transistor Coupler





TD101X Series

LSOP4, DC Input, Photo Transistor Coupler





TD101X Series
LSOP4, DC Input, Photo Transistor Coupler

(



TD101X Series

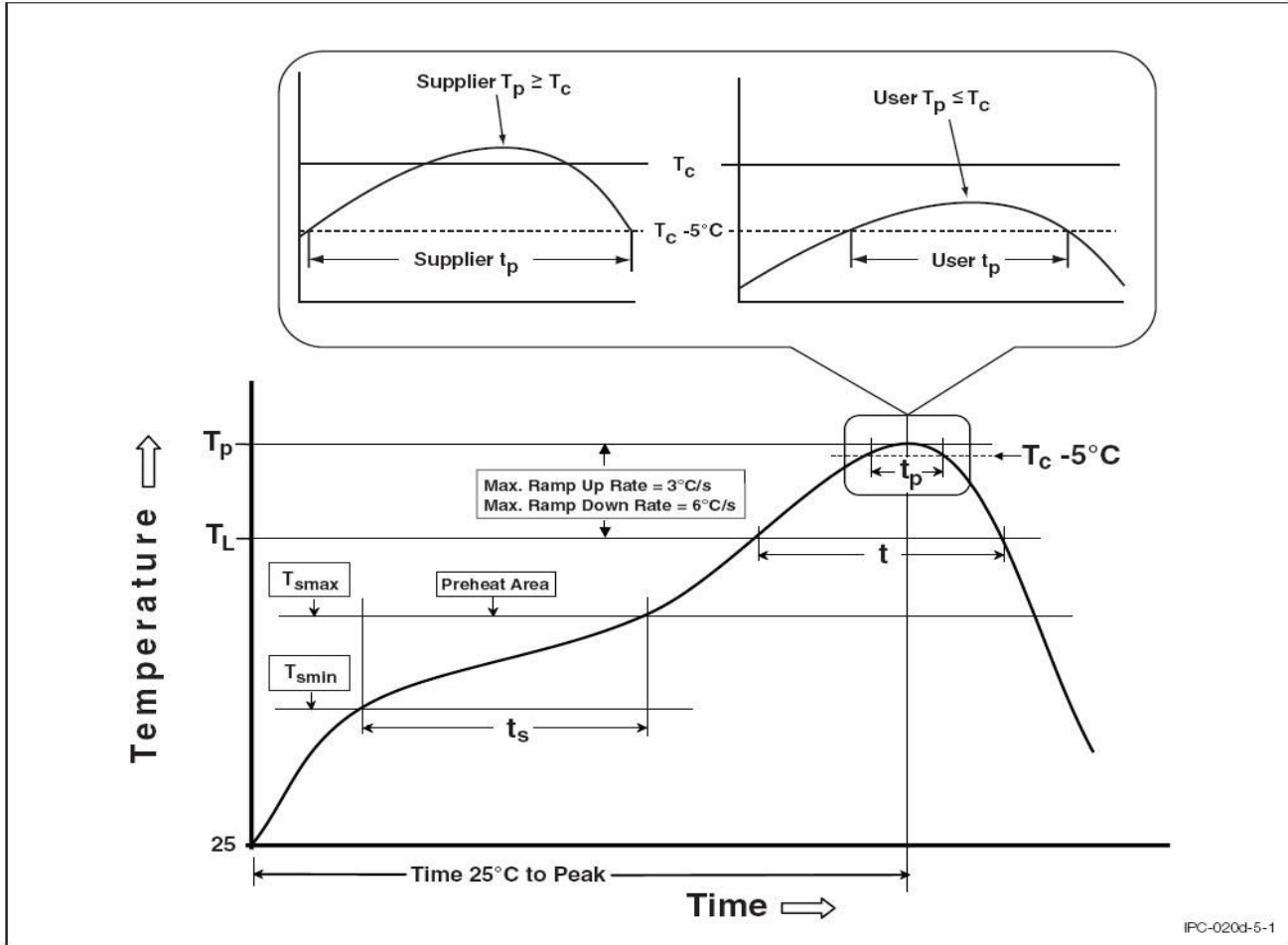
LSOP4, DC Input, Photo Transistor Coupler

<p>TD : , ompany Abbr#</p> <p>101X : * an" 60J1J?J=J!J(J5J3J7J<8</p> <p>K : Tape and * eel Option 6T1JT?8</p> <p>G : Green</p> <p>) :)D1 Option 6) or 4one8</p>			
T1	=000 2nitsJ * eel	= * eelsJAnner bo-	(Anner bo-JOuter bo- D ! (" 2nits
T?	=000 2nitsJ * eel	= * eelsJAnner bo-	(Anner bo-JOuter bo- D ! (" 2nits



TD101X Series

LSOP4, DC Input, Photo Transistor Coupler



IPC-020d-5-1

Temperature +in# 6T _{min} 8	100	1 (0/ ,
Temperature +a-# 6T _{ma} -8	1 (0	?00/ ,
Time 6ts8 from 6T _{min} to T _{ma} -8	50.1?0 seconds	50.1?0 seconds
* amp.up * ate 6t _L to t 8	=/ , Jsecond ma-#	=/ , Jsecond ma-#
Li>uidous Temperature 6TL8	17=/ ,	?13/ ,
Time 6tL8 + aintained Abo&e 6TL8	50 : 1 (0 seconds	50 : 1 (0 seconds
ea" ;ody ac"age Temperature	?=(/ , L0/ , J.(/ ,	?50/ , L0/ , J.(/ ,
Time 6t 8 within (/ , of ?50/ ,	?0 seconds	=0 seconds
* amp.down * ate 6T to TL8	5/ , Jsecond ma-	5/ , Jsecond ma-
Time ?(/ , to ea" Temperature	5 minutes ma-#	7 minutes ma-#



TD101X Series

LSOP4, DC Input, Photo Transistor Coupler

LAG ' T4A4G is continually improving the quality, reliability, function and design. LAG ' T4A4G reserves the right to make changes without further notices.

The characteristic curves shown in this datasheet are representing typical performance which are not guaranteed.

LAG ' T4A4G makes no warranty, representation or guarantee regarding the suitability of the products for any particular purpose or the continuing production of any product. To the maximum extent permitted by applicable law, LAG ' T4A4G disclaims both any and all liability arising out of the application or use of any product, both any and all liability, including without limitation special, consequential or incidental damages, and both any and all implied warranties, including warranties of fitness for particular

The products shown in this publication are designed for the general use in electronic applications such as office automation, equipment, communications devices, audio/visual equipment, electrical application and instrumentation purpose, non-infringement and merchantability.

This product is not intended to be used for military, aircraft, automotive, medical, life sustaining or lifesaving applications or any other application which can result in human injury or death.

Please contact LAG ' T4A4G sales agent for special application request.

Immersion unit's body in solder paste is not recommended.

Parameters provided in datasheets may vary in different applications and performance may vary over time. All operating parameters, including typical parameters, must be validated in each customer application by the customer's technical experts. Product specifications do not expand or otherwise modify LAG ' T4A4G's terms and conditions of purchase, including but not limited to the warranty expressed therein.

Discoloration might be occurred on the package surface after soldering, reflow or long time use. It neither impacts the performance nor reliability.