



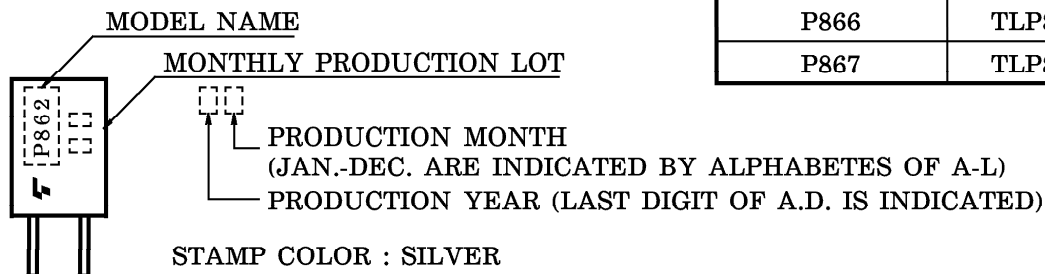
RECOMMENDED OPERATING CONDITIONS

CHARACTERISTIC	SYMBOL	MIN.	TYP.	MAX.	UNIT
Supply Voltage	$V_{CC}$	—	5	16	V
Forward Current	$I_F$	—	—	20	mA
Operating Temperature	$T_{opr}$	-10	—	70	°C

OPTO-ELECTRICAL CHARACTERISTICS (Ta = 25°C)

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
LED	Forward Voltage	$V_F$	$I_F = 10\text{mA}$	1.00	1.15	1.30	V
	Reverse Current	$I_R$	$V_R = 5\text{V}$	—	—	10	$\mu\text{A}$
	Peak Emission Wavelength	$\lambda_P$	$I_F = 10\text{mA}$	—	940	—	nm
DETECTOR	Dark Current	$I_D (I_{CEO})$	$V_{CE} = 16\text{V}, I_F = 0$	—	—	0.25	$\mu\text{A}$
	Peak Sensitivity Wavelength	$\lambda_P$	—	—	870	—	nm
COUPLED	Current Transfer Ratio	$I_C / I_F$	$V_{CE} = 2\text{V}, I_F = 1\text{mA}$	30	—	1200	%
	Collector-Emitter Saturation Voltage	$V_{CE (sat)}$	$I_F = 2\text{mA}, I_C = 0.3\text{mA}$	—	0.75	1	V
	Rise Time	$t_r$	$V_{CC} = 5\text{V}, I_C = 1\text{mA}$	—	600	—	$\mu\text{s}$
	Fall Time	$t_f$	$R_L = 1\text{k}\Omega$	—	500	—	

PRODUCT INDICATION



ABBREVIATION	TYPE
P862	TLP862
P866	TLP866
P867	TLP867

**PRECAUTION**

Please be careful of the followings.

1. If chemical are used for cleaning, the soldered surface only shall be cleaned with chemicals avoiding the whole cleaning of the package.
2. The container is made of polycarbonate. Polycarbonate is usually stable with acid, alcohol, and aliphatic hydrocarbons however, with petrochemicals (such as benzene, toluene, and acetone), alkali, aromatic hydrocarbons, or chloric hydrocarbons, polycarbonate becomes cracked, swollen, or melted. Please take care when choosing a packaging material by referencing the table below.

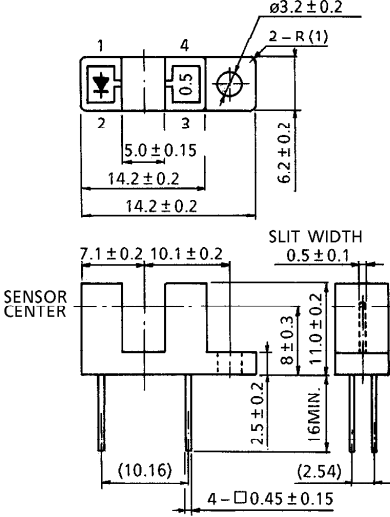
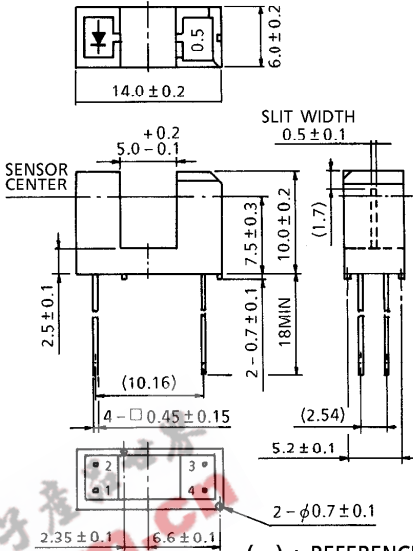
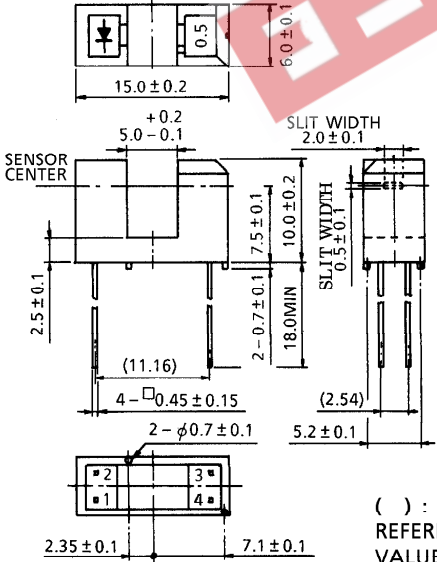
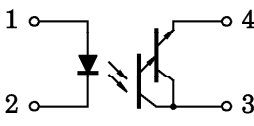
<Chemicals to avoid with polycarbonate>

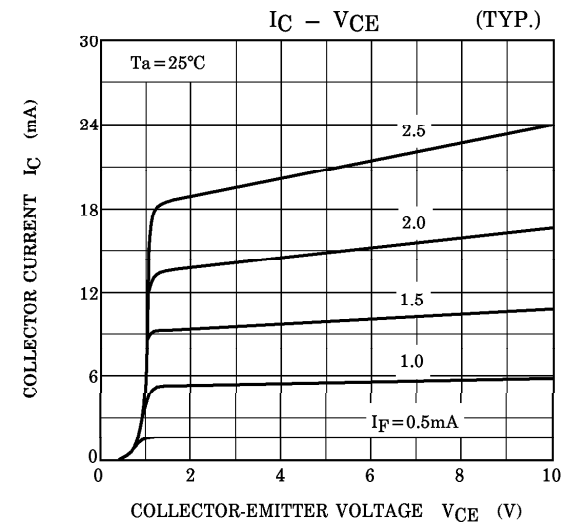
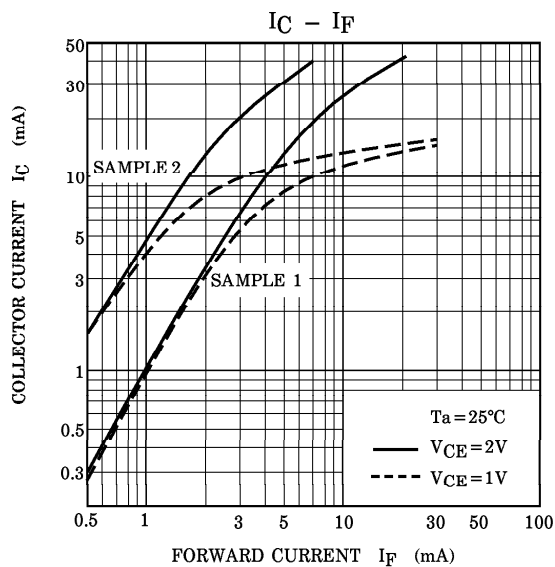
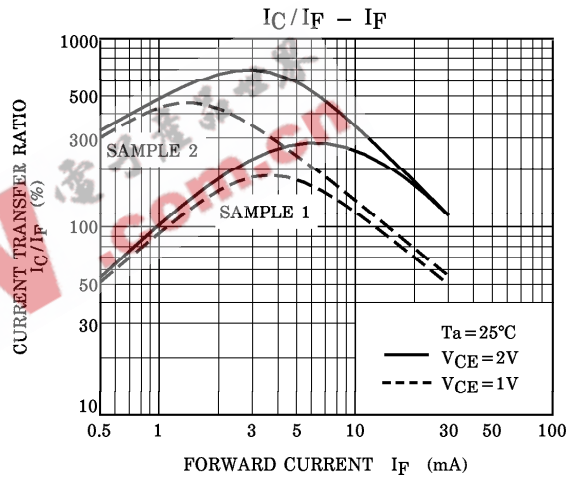
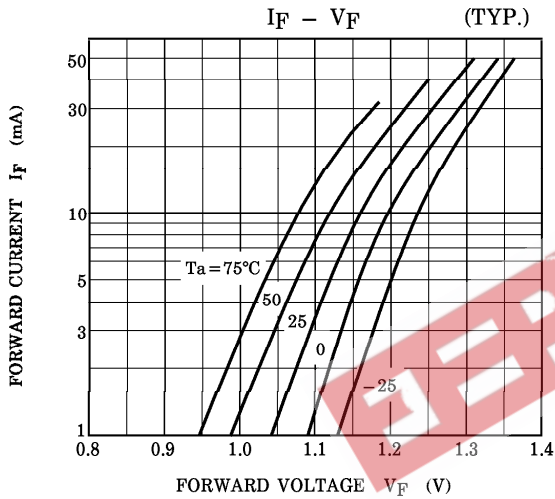
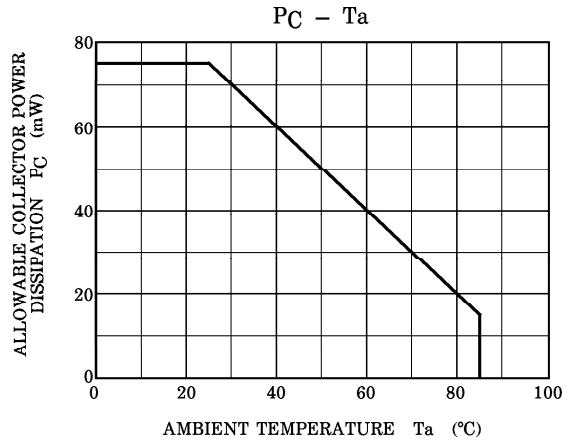
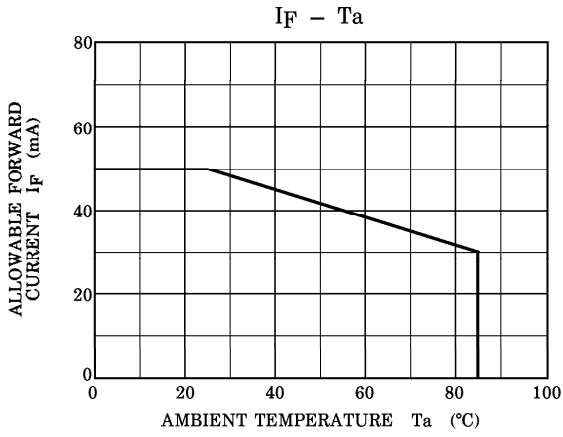
	PHENOMENON	CHEMICALS
A	Little deterioration but staining	<ul style="list-style-type: none"> <li>• nitric acid (low concentration), hydrogen peroxide, chlorine</li> </ul>
B	Cracked, crazed, or swollen	<ul style="list-style-type: none"> <li>• acetic acid (70% or more)</li> <li>• gasoline</li> <li>• methyl ethyl ketone, ethyl acetate, butyl acetate</li> <li>• ethyl methacrylate, ethyl ether, MEK</li> <li>• acetone, m-amino alcohol, carbon tetrachloride</li> <li>• carbon disulfide, trichloroethylene, cresol</li> <li>• thinners, oil of turpentine</li> <li>• triethanolamine, TCP, TBP</li> </ul>
C	Melted { } : Used as solvent.	<ul style="list-style-type: none"> <li>• concentrated sulfuric acid</li> <li>• benzene</li> <li>• styrene, acrylonitrile, vinyl acetate</li> <li>• ethylenediamine, diethylenediamine</li> <li>• {chloroform, methyl chloride, tetrachloromethane, dioxane, 1, 2-dichloroethane}</li> </ul>
D	Decomposed	<ul style="list-style-type: none"> <li>• ammonia water</li> <li>• other alkali</li> </ul>

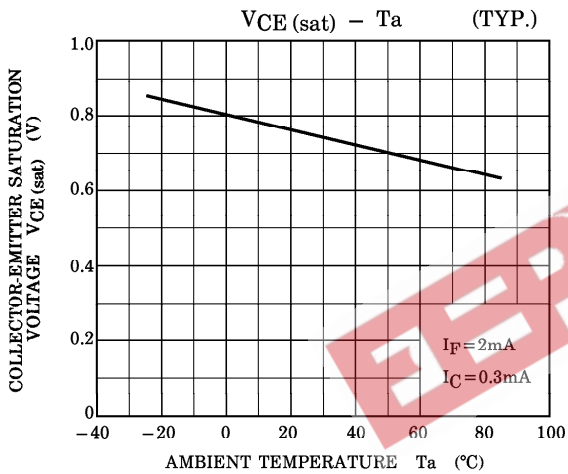
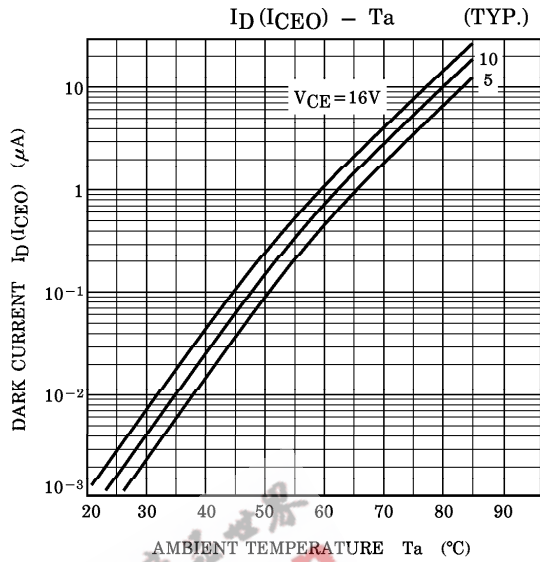
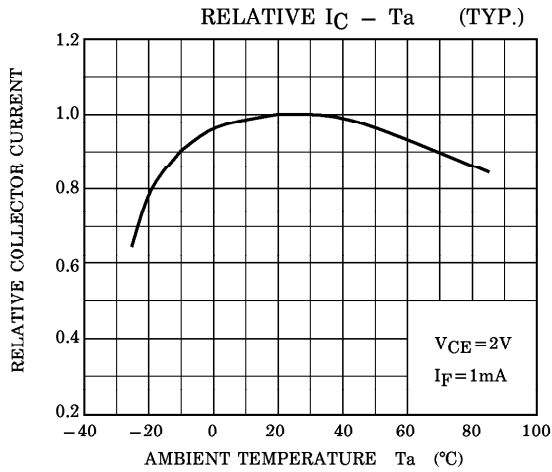
3. TLP862, TLP866, TLP867 shall be mounted on an unwarped surface.
4. Screw shall be tightened to clamping torque of 0.59N·m. (TLP862)

OUTLINE DRAWINGS

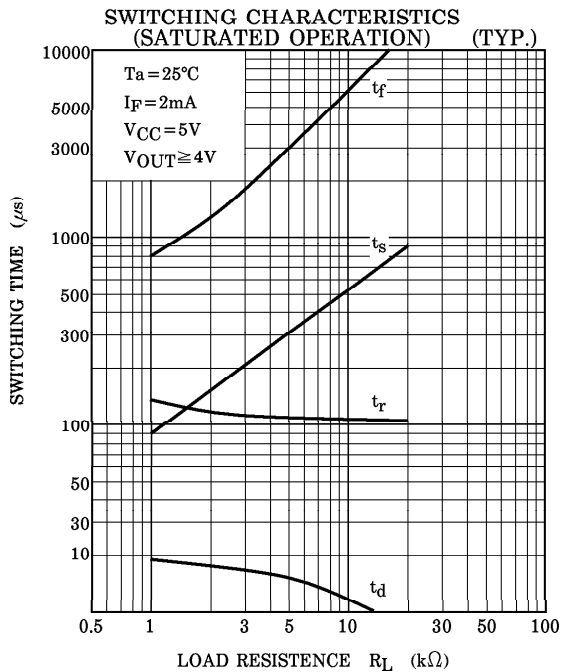
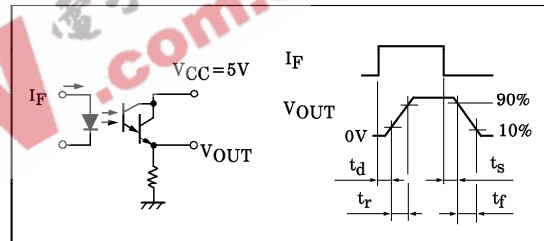
Unit in mm

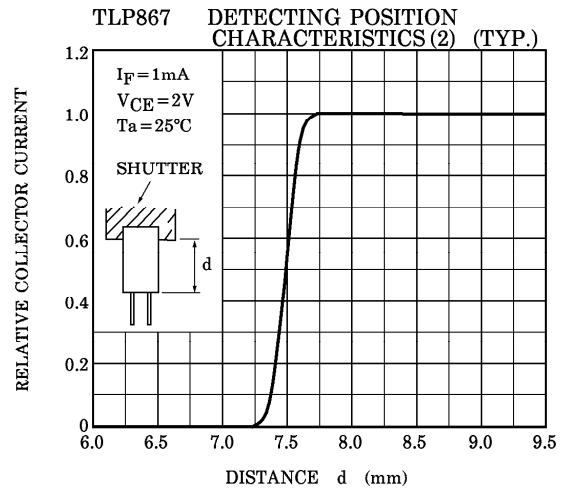
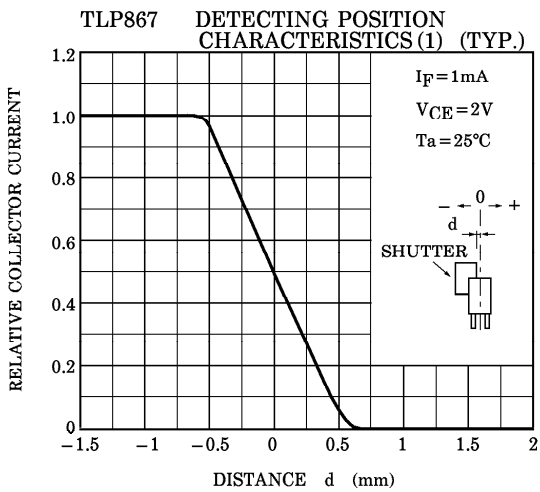
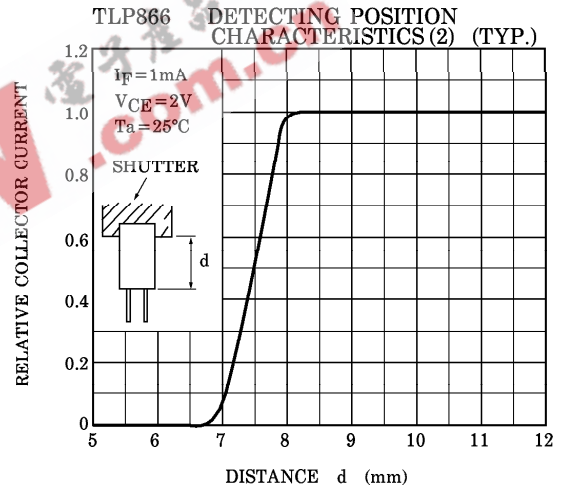
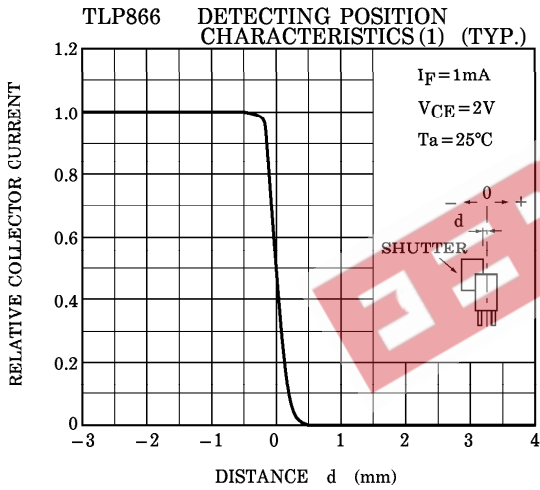
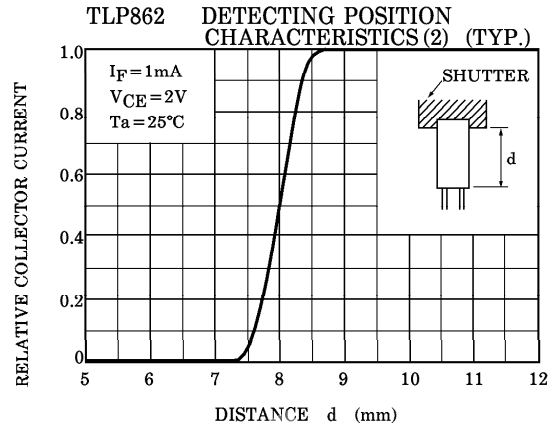
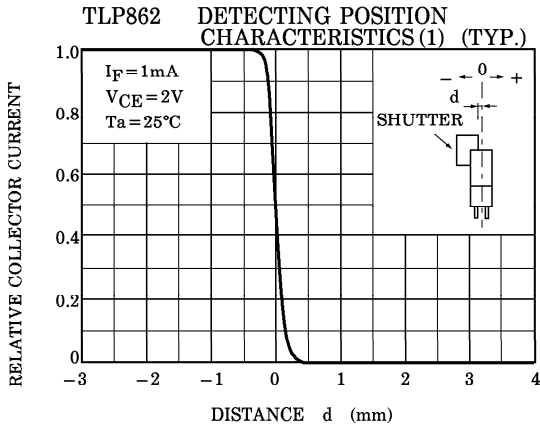
<p>TLP862</p>  <p>( ) : REFERENCE VALUE</p>	<p>TLP866</p>  <p>( ) : REFERENCE VALUE</p>
<p>JEDEC —</p>	<p>JEDEC —</p>
<p>EIAJ —</p>	<p>EIAJ —</p>
<p>TOSHIBA 11-20B2</p>	<p>TOSHIBA 11-14A1</p>
<p>TLP867</p>  <p>( ) : REFERENCE VALUE</p>	<p>Weight : 0.85g (typ.) (TLP862)                      0.65g (typ.) (TLP866)                      0.72g (typ.) (TLP867)</p> <p>PIN CONNECTION</p>  <p>1. ANODE                      2. CATHODE                      3. COLLECTOR                      4. EMITTER</p>
<p>JEDEC —</p>	
<p>EIAJ —</p>	
<p>TOSHIBA 11-15B1</p>	





SWITCHING TIME TEST CIRCUIT





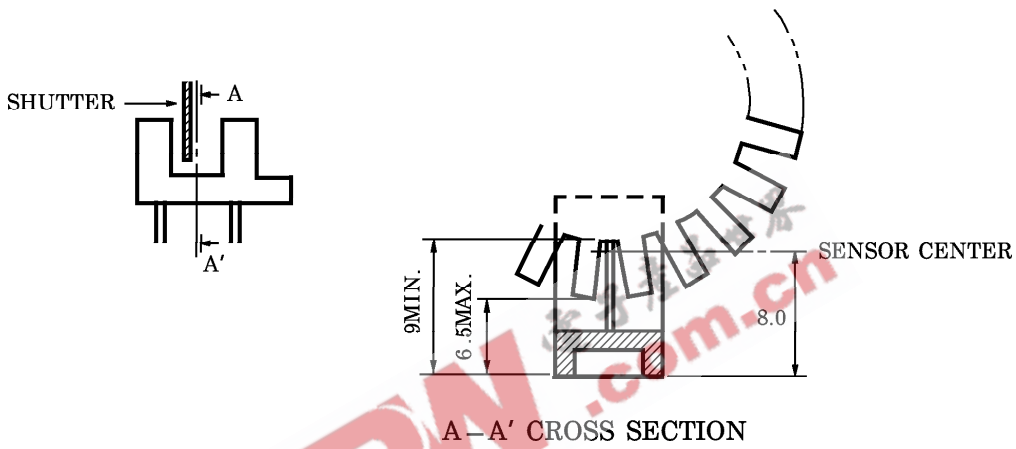
POSITIONING OF SHUTTER AND DEVICE

To operate correctly, make sure that the shutter and the device are positioned as shown in the figure below.

The slit pitch of the shutter must be set wider than the slit width of the device.  
Determine the width taking the switching time into consideration.

TLP862

Unit in mm



TLP866

