

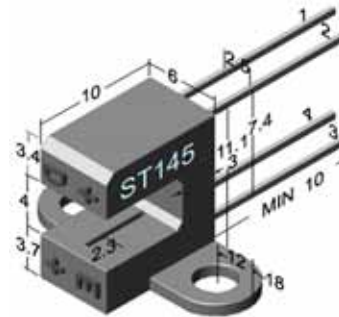
## ST145

### ● Features

- Combines high output GaAs IRED with high sensitive phototransistor.
- Non-contact detecting manner.
- Slit width(resolution): 0.4mm.

### ● Dimensions Unit:mm

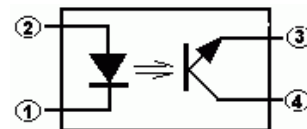
Unless otherwise specified, the tolerances are  $\pm 0.2\text{mm}$



### ● Absolute Maximum Ratings(Ta=25°C)

Parameter		Symbol	Rating	Unit
Input	Forward Current	$I_F$	50	mV
	Reverse Voltage	$V_R$	6	V
	Power Dissipation	$P$	75	mW
Output	Collector-Emitter Voltage	$V_{CEO}$	25	V
	Emitter-Collector Voltage	$V_{ECO}$	6	V
	Collector Power Dissipation	$P_C$	50	mW
*Operating Temperature		$T_{opr}$	-20~65	°C
Storage Temperature		$T_{stg}$	-30~75	°C
** Soldering Temperature		$T_{sol}$	260	°C

Internal Circuit



\*The special requirement could be met according to customer's request.

\*\*Soldering time: 5s max. Soldering position: at least 1.5mm from the base of the package.

### ● Electro-Optical Characteristics (Ta=25°C)

Parameter		Symbol	Test Condition	Min.	Typ.	Max.	Unit
Input	Forward Voltage	$V_F$	$I_F=20\text{mA}$	-	1.25	1.5	V
	Reverse Current	$I_R$	$V_R=3\text{V}$	-	-	10	$\mu\text{A}$
Output	Collector Dark Current	$I_{CEO}$	$V_{CE}=20\text{V}$	-	-	1	$\mu\text{A}$
	Collector Light Current	$I_L$	$V_{CE}=5\text{V}$ $I_F=8\text{mA}$	0.3	-	-	mA
	Collector-Emitter Saturation Voltage	$V_{CE(SAT)}$	$I_F=8\text{mA}$ $I_C=0.15\text{mA}$	-	-	0.4	V
Transfer Character-istics	Response Time	Rise Time	$I_F=20\text{mA}$ $V_{CE}=5\text{V}$ $R_C=100\Omega$	-	5	-	$\mu\text{S}$
		Fall Time		$T_f$	-	5	-