1. Scope :

This specification applies to NPN silicon phototransistor chips,
Device No. ST-0136.

2. Structure :

2-1. Planar type.
2-2. Electrodes :
N (Collector) side : Gold alloy.
P (Base) side : Aluminum alloy.
N (Emitter) side : Aluminum alloy.

3. Size :

3-1. Chip size : 24 mils × 36 mils (0.610 mm × 0.914 mm).
3-2. Chip thickness : 7.5 ± 1.5 mils (0.191 ± 0.038 mm).
3-3. Active area : 16 mils × 28 mils ± 1.2 mils (0.406 mm × 0.711 mm ± 0.03 mm).
3-4. Bonding pad: 5.9 mils × 5.9 mils ± 0.8 mils (0.150 mm × 0.150 mm ± 0.02 mm).
3-5. Pattern drawing : refer to the attached drawing.

*Including scribing line .The chip size is about (0.585±0.025)×(0.889± 0.025)mm^{2}. after dicing.

4. Electrical characteristics (Ta = 25 ℃)

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Collector-emitter Breakdown Voltage	BV_{CEO}	I_C=100uA I_B=0	60			V
Emitter-collector Breakdown Voltage	BV_{ECO}	I_E=10uA I_B=0	5			V
Collector dark current	I_{CEO}	V_{CE}=20V H=0mw/c㎡			100	nA
Collector-emitter Saturation Voltage	$V_{CE(S)}$	Ic=2mA IB=100uA			0.3	V
Rise/fall time	t_R/t_F	V_{CE}=5V I_C=1mA R_L=1000Ω		15/15		uS
Current gain	h_{FE}	V_{CE}=5V I_C=2mA	200			
Junction cappacitance	C_{CB}	f=1MHZ V_{CB}=3V	6.2	7.2	8.2	PF