

1. Scope :

This specification applies to NPN silicon photodarlington chips,
Device No. ST-0128.

2. Structure :

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

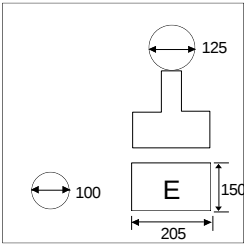
3. Size :

- 3-1. Chip size : 27.5 mils × 27.5 mils (0.700 mm × 0.700 mm).
- 3-2. Chip thickness : 7.5 ± 1.5 mils (0.191 ± 0.03 mm).
- 3-3. Active area : 341 mils ± 1.4 mils (0.22 mm² ± 0.0025 mm).
- 3-4. Bonding pad: 5 mils x 2.7 mils ± 0.8 mils (0.125 mm x 0.07 mm ± 0.02 mm).
- 3-5. Pattern drawing : refer to the attached drawing.

4. Electrical characteristics (Ta = 25 °C)

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	7			V
Collector dark current	I _{CEO}	V _{CE} =10V H=0mw/cm ²			1000	nA
Collector-emitter Saturation Voltage	V _{CE(S)}	I _c =15mA I _B =100uA			1.0	V
Emitter-base Saturation Voltage	V _{BE(S)}	I _c =15mA I _B =100uA			1.45	V
Rise/Fall time	t _R /t _F	V _{CE} =5V I _C =10mA R _L =100Ω		40/60		uS
Current gain	h _{FE}	V _{CE} =5V I _C =10mA	5K			

PATTERN DRAWING
UNIT:um



HFE Rank A : 5K - 20K 、 Rank B : 10K - 40K 、 Rank C : 20K - 80K

5. Relative spectral response vs. wavelength :

