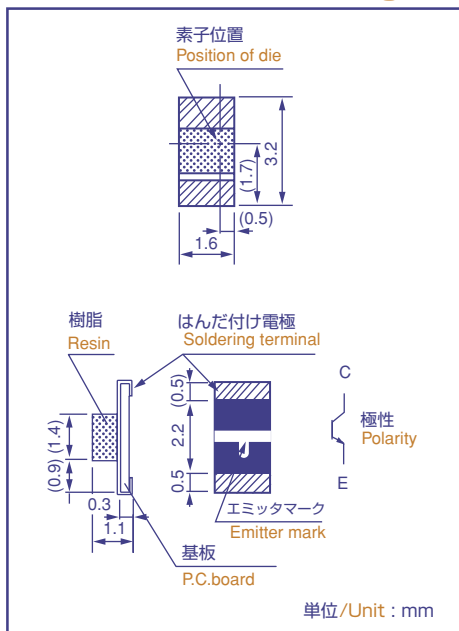


# CPT-230 シリーズ

## Surface Mountable Chip Photo-transistor CPT-230 Series



### 外形寸法図/Outline drawing



### 特徴/Features

1. チップ型フォトトランジスタで上面及び下面実装可能。
2. 外形寸法は3.2(L)×1.6(W)×1.1(H)mmの小型・角型サイズ。
1. Developed as a chip type SMD photo-transistor for both reverse and top surface mounting
2. Small and square size, dimensions : 3.2(L)×1.6(W)×1.1(H)mm

### 用途/Application

1. CDプレーヤのディスク位置検出。
2. VTR、カメラ一体型VTRのテープ位置検出。
3. フロッピーディスクの位置検出。
4. ページャー、携帯電話の周囲光検出。
5. その他の位置検出。
1. Position detecting for compact disc in CD player
2. Position detecting for tape in VCR and portable VCR incorporated with camera
3. Position detecting for floppy disc in floppy disc drive
4. Detection of ambient light for pagers and mobile telephones
5. Position detecting for other equipment

### 電気的光学的特性/Electro-optical characteristics

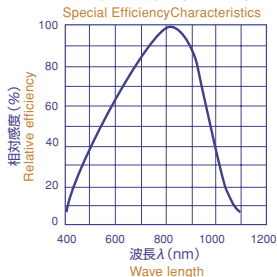
(Ta 25°C)

| 項目/Item   | 記号<br>Symbol   | 条件<br>Conditions                         | 最小<br>Min | 標準<br>Typ | 最大<br>Max | 単位<br>Unit |
|---|----------------|--|-----------|-----------|-----------|------------|
| 光電流/Light current   | $I_c$          | $V_{CE}=5V$ *1 $E_V=0.1mW/cm^2$          | 18        | 50        | (110)     | $\mu A$    |
| 暗電流/Collector dark current                                      | $I_{CEO}$      | $V_{CE}=5V$                              | -         | 5         | 100       | nA         |
| コレクタ・エミッタ間飽和電圧<br>Saturated voltage between collector & emitter | $V_{CE(Sat)}$  | $I_c=100\mu A$ *1 $E_V=0.1mW/cm^2$       | -         | 0.15      | 0.4       | V          |
| ピーク感度波長/Peak sensitive wave length                              | $\lambda_p$ *2 | -  | -         | 820       | -         | nm         |
| 分光感度/Spectral efficiency  | $\lambda$ *2   | -  | -         | 450~1050  | -         | nm         |
| 応答時間/<br>Response Time  | 立上がり/Rise time | $V_{CE}=5V$ $I_c=2mA$<br>$R_L=100\Omega$ | -         | 6         | -         | $\mu SEC$  |
|   | 立下がり/Fall time |  | -         | 6         | -         | $\mu SEC$  |
| 半値角/Spectral width of half value                                | $\theta_{1/2}$ | -  | -         | $\pm 75$  | -         | deg.       |

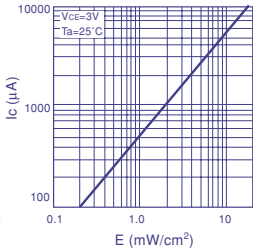
\*1  $E_V=950nm$ IR光による放射照度/\*1  $E_V=$ Infrared irradiance at 950 nm  
\*2 Xタイプ標準/\*2 Standard for X type

### 諸特性/Characteristics

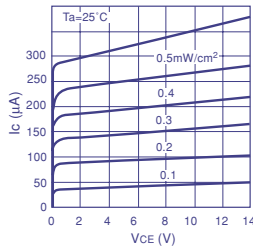
\*2 分光感度特性 (Ta=25°C)



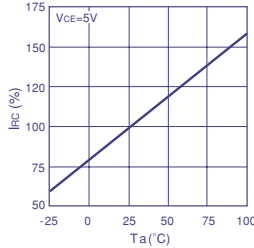
Ic-E 特性  
Ic-E Characteristics



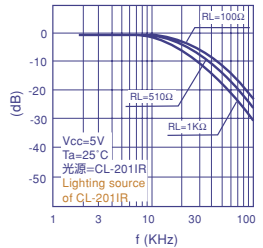
Ic-Vce 特性  
Ic-Vce Characteristics



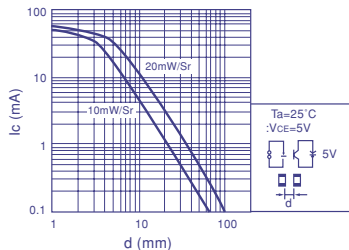
Irc-Ta 特性  
Irc-Ta Characteristics



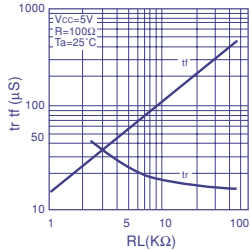
周波数特性  
Frequency response



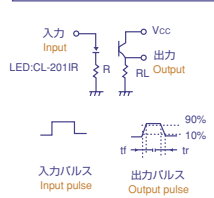
CL-201IRとの組み合わせ特性  
Combined Characteristics with CL-201IR



tr/rf-RL 特性  
tr/rf-RL Characteristics



応答速度測定回路  
Measuring circuit for response time



指向特性  
Directive Characteristics

