

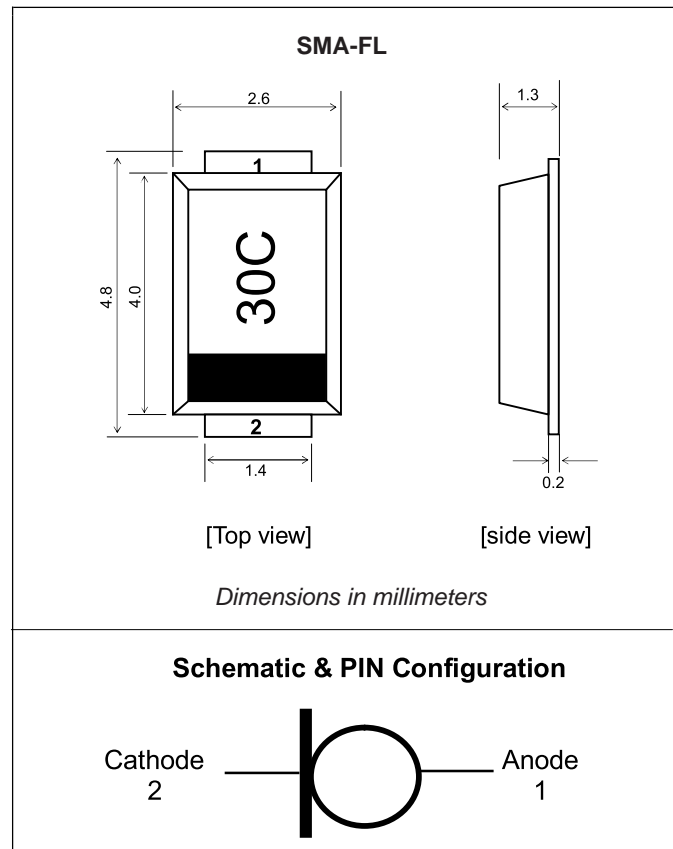
FCRD3005P8

Features

- Constant current over wide voltage range
- Stabilize the performance of LED
- Realize simple LED driving circuit
- Power package with heat sink

Applications

- Automotive LED lighting
- Instrument backlighting
- Display signage
- Charging circuit

Absolute Maximum Ratings at $T_A = 25\text{ }^\circ\text{C}$

Parameter	Symbol	Ratings	Unit
Power Dissipation	P_D	0.6	W
Reverse Voltage	V_R	0.5	V
Operating Temperature	T_{OP}	-30 to 125	$^\circ\text{C}$
Storage Temperature	T_{STG}	-55 to 150	$^\circ\text{C}$

Electrical Characteristics at $T_A = 25\text{ }^\circ\text{C}$

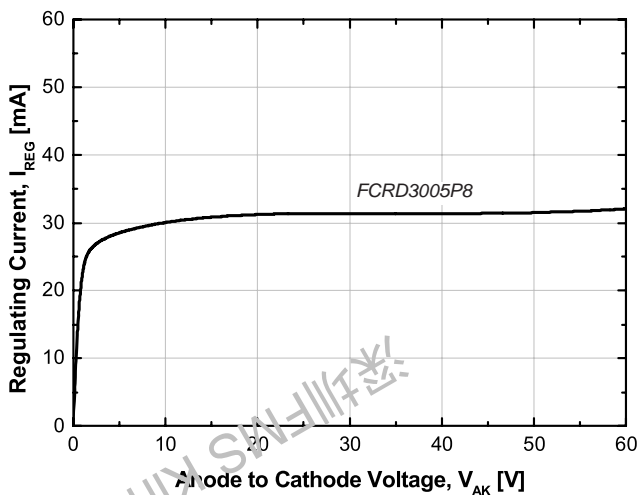
Parameter	Symbol	Conditions	Ratings			Unit
			Min	Typ	Max	
Operating Voltage	V_{AK}^{*1}				50	V
Regulator Current	I_{REG}^{*2}	$V_{AK} = 10\text{V}$	27	30	33	mA
Dynamic Impedance	Z_{AK}	$V_{AK} = 25\text{V}$		15		$\text{k}\Omega$
		$V_{AK} = 10\text{V}$		3.8		$\text{k}\Omega$
Limiting Voltage	V_{AKL}	$I_{REGL} = 0.8 \cdot I_{REG}$		2		V
Temperature Coefficient	T_C	$25\text{ }^\circ\text{C}$ to $50\text{ }^\circ\text{C}$	-0.25	-0.3	-0.45	$\%/^\circ\text{C}$

*1 V_{AK} is maximum operating voltage determined by the maximum power rating, $V_{AK,MAX} = P_D / I_{REG}$

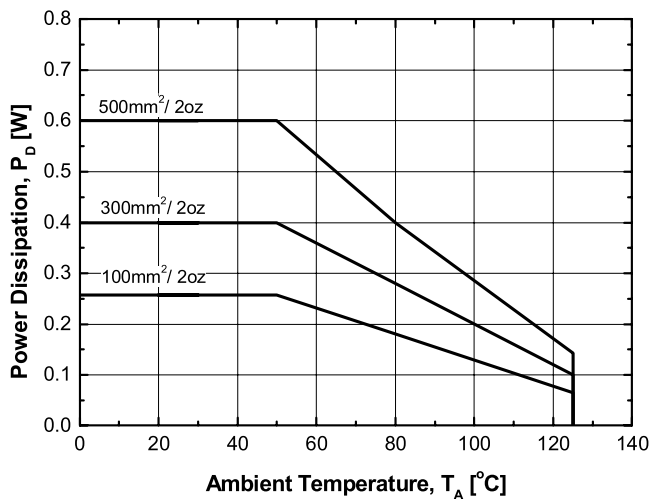
*2 I_{REG} is measured after applying the voltage, V_{AK} , for 10 sec duration.

FCRD3005P8 Electrical Characteristics

I – V Characteristics

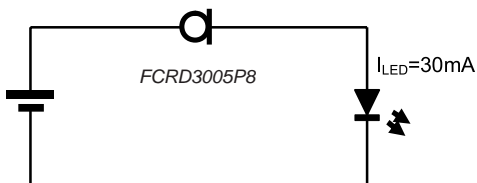


Maximum Power Rating

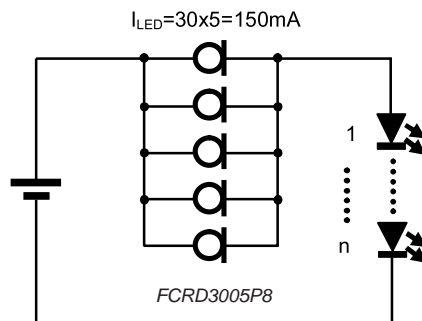


Typical Application circuits

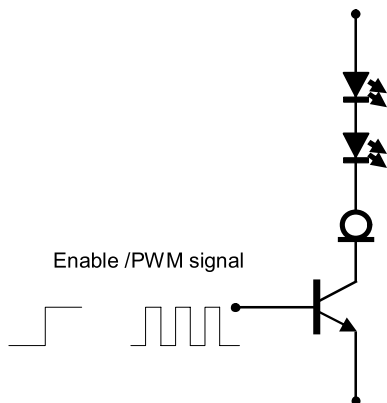
LED Driving with DC supply



LED Driving with DC supply

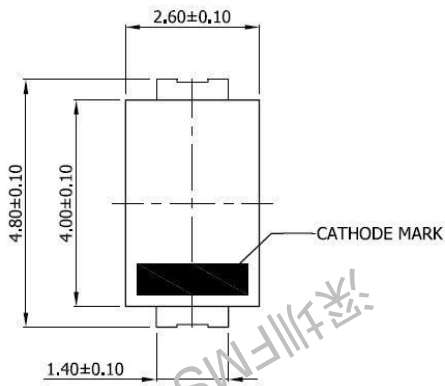


LED dimming control

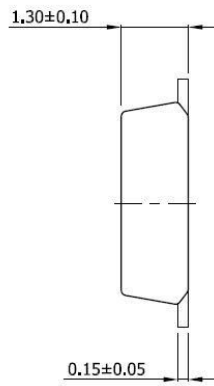


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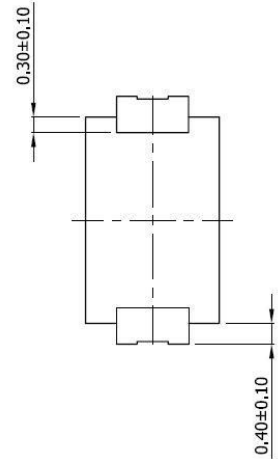
PKG Dimensions (unit : mm)



Top view



Side view



Bottom view

Land Pattern (unit : mm)

