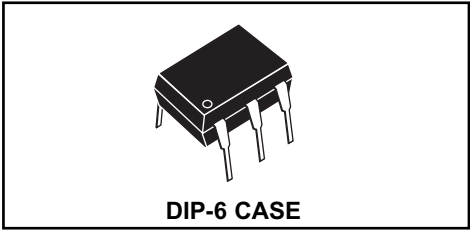




H11C4M
PHOTO SCR OPTOCOUPLER



CentralTM

Semiconductor Corp.

DESCRIPTION:

The Central Semiconductor H11C4M is a gallium-arsenide infrared emitting Diode optically coupled with a light activated silicon controlled rectifier in a DIP-6 dual-in-line package. This device is designed for applications requiring a high degree of isolation between triggering and load circuits.

MARKING: H11C4M

FEATURES:

- Forward current $I_F=50\text{mA}$ MAX (Input)
- On-State current $I_{T(RMS)}=150\text{mA}$ (Input)
- Reverse current $I_R=10\mu\text{A}$ MAX (Input)
- Blocking voltage V_{DRM} , $V_{RRM}=400\text{V}$ MAX (Output)
- Isolation test voltage $5000V_{RMS}$

APPLICATIONS:

- Communications equipment
- Solid state relays
- Portable equipment
- Low power logic circuits requiring a high degree of input/output isolation

MAXIMUM RATINGS: ($T_A=25^\circ\text{C}$)

Isolation Voltage
Isolation Resistance (@ $V_{IO}=500\text{V}$)
Operating Temperature Range
Storage Temperature Range

SYMBOL

V_{ISO} 5000
 R_{ISO} 10^{11}
 T_J -30 to +100
 T_{stg} -55 to +125

UNITS

V_{RMS}
 Ω
 $^\circ\text{C}$
 $^\circ\text{C}$

INPUT MAXIMUM RATINGS (LED): ($T_A=25^\circ\text{C}$)

Continuous Forward Current
Continuous Reverse Voltage
Peak Forward Surge Current ($t_p=1\mu\text{s}$)
Power Dissipation

SYMBOL

I_F 50
 V_R 5.0
 I_{FSM} 1.0
 P_D 75

UNITS

mA
V
A
mW

OUTPUT MAXIMUM RATINGS (SCR): ($T_A=25^\circ\text{C}$)

Peak Repetitive Off-State Voltage
Peak Reverse Gate Voltage
RMS On-State Current
Peak On-State Current ($t_p=100\mu\text{s}$)
Peak One Cycle Surge ($t_p=10\text{ms}$)

SYMBOL

V_{DRM} , V_{RRM} 400
 V_{RGM} 6.0
 $I_{T(RMS)}$ 150
 I_T 10
 I_{TSM} 5.0

UNITS

V
V
mA
A
A

INPUT ELECTRICAL CHARACTERISTICS: ($T_A=25^\circ\text{C}$ unless otherwise noted)

SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNITS
I_R	$V_R=3.0\text{V}$			10	μA
V_F	$I_F=10\text{mA}$			1.5	V
C_J	$V_R=0\text{V}$, $f=1.0\text{MHz}$		50		pF

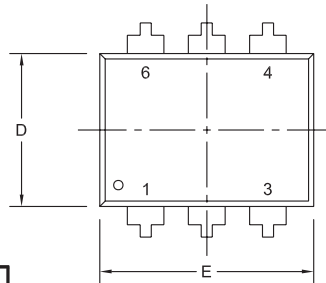
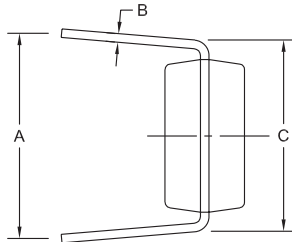
OUTPUT ELECTRICAL CHARACTERISTICS: ($T_A=25^\circ\text{C}$ unless otherwise noted)

SYMBOL	TEST CONDITIONS	TYP	MAX	UNITS
$I_{\text{DRM}}, I_{\text{RRM}}$	$V_{\text{DRM}}, V_{\text{RRM}}=400\text{V}, R_{\text{GK}}=10\text{k}\Omega, T_A=100^\circ\text{C}$		150	μA
V_{TM}	$I_{\text{TM}}=100\text{mA}$		1.3	V
I_{GT}	$V_{\text{D}}=100\text{V}, R_{\text{L}}=10\text{k}\Omega$		50	μA
V_{GT}	$V_{\text{D}}=100\text{V}, R_{\text{L}}=10\text{k}\Omega$		1.0	V
I_{H}	$I_{\text{T}}=100\text{mA}, R_{\text{GK}}=27\text{k}\Omega$		500	μA

COUPLER ELECTRICAL CHARACTERISTICS: ($T_A=25^\circ\text{C}$ unless otherwise noted)

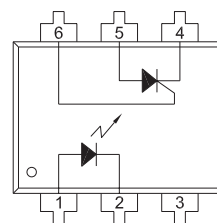
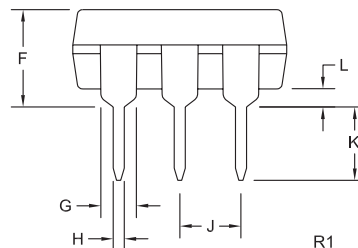
SYMBOL	TEST CONDITIONS	TYP	MAX	UNITS
I_{FT}	$V_{\text{AK}}=50\text{V}, R_{\text{GK}}=10\text{k}\Omega$		20	mA
I_{FT}	$V_{\text{AK}}=100\text{V}, R_{\text{GK}}=27\text{k}\Omega$		11	mA

DIP-6 CASE - MECHANICAL OUTLINE



SYMBOL	DIMENSIONS			
	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.300	0.347	7.62	8.81
B	0.008	0.016	0.20	0.41
C	0.300		7.62	
D	0.240	0.270	6.10	6.86
E	0.292	0.308	7.42	7.82
F	0.115	0.200	2.92	5.08
G	0.045	0.070	1.14	1.78
H	0.016	0.022	0.41	0.56
J	0.100		2.54	
K	0.100	0.154	2.54	3.91
L	0.020	-	0.51	-

DIP-6 (REV: R1)



LEAD CODE:

- 1) ANODE (LED)
- 2) CATHODE (LED)
- 3) NO CONNECTION
- 4) CATHODE (SCR)
- 5) ANODE (SCR)
- 6) GATE (SCR)

MARKING: H11C4M

R2 (8-December 2008)

OUTSTANDING SUPPORT AND SUPERIOR SERVICES



PRODUCT SUPPORT

Central's operations team provides the highest level of support to insure product is delivered on-time.

- Supply management (Customer portals)
- Inventory bonding
- Consolidated shipping options
- Custom bar coding for shipments
- Custom product packing

DESIGNER SUPPORT/SERVICES

Central's applications engineering team is ready to discuss your design challenges. Just ask.

- Free quick ship samples (2nd day air)
- Online technical data and parametric search
- SPICE models
- Custom electrical curves
- Environmental regulation compliance
- Customer specific screening
- Up-screening capabilities
- Special wafer diffusions
- PbSn plating options
- Package details
- Application notes
- Application and design sample kits
- Custom product and package development

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