



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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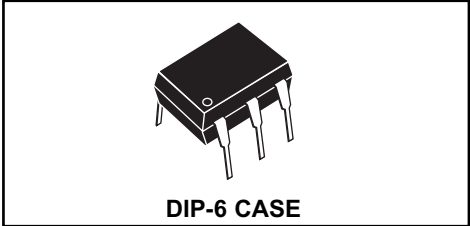
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**H11C4M**  
**PHOTO SCR OPTOCOUPLER**



# Central<sup>TM</sup>

**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		UNITS
$V_{ISO}$	5000	$V_{RMS}$
$R_{ISO}$	$10^{11}$	$\Omega$
$T_J$	-30 to +100	$^\circ\text{C}$
$T_{stg}$	-55 to +125	$^\circ\text{C}$

**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		UNITS
$I_F$	50	mA
$V_R$	5.0	V
$I_{FSM}$	1.0	A
$P_D$	75	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		UNITS
$V_{DRM}, V_{RRM}$	400	V
$V_{RGM}$	6.0	V
$I_{T(RMS)}$	150	mA
$I_T$	10	A
$I_{TSM}$	5.0	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	$\mu\text{A}$
$V_F$	$I_F=10\text{mA}$			1.5	V
$C_J$	$V_R=0\text{V}, f=1.0\text{MHz}$		50		pF

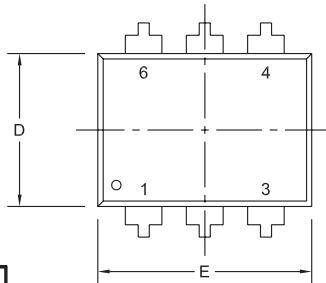
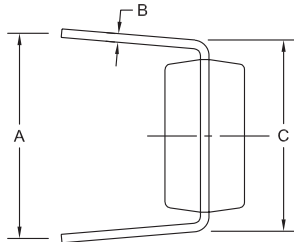
**OUTPUT ELECTRICAL CHARACTERISTICS:** ( $T_A=25^\circ\text{C}$  unless otherwise noted)

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	$\mu\text{A}$
$V_{\text{TM}}$	$I_{\text{TM}}=100\text{mA}$		1.3	V
$I_{\text{GT}}$	$V_{\text{D}}=100\text{V}, R_{\text{L}}=10\text{k}\Omega$		50	$\mu\text{A}$
$V_{\text{GT}}$	$V_{\text{D}}=100\text{V}, R_{\text{L}}=10\text{k}\Omega$		1.0	V
$I_{\text{H}}$	$I_{\text{T}}=100\text{mA}, R_{\text{GK}}=27\text{k}\Omega$		500	$\mu\text{A}$

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

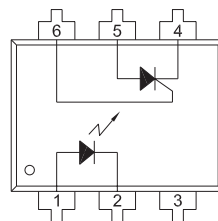
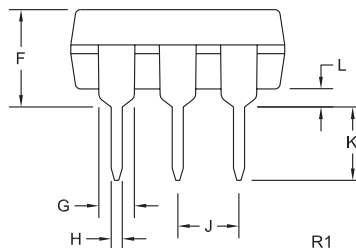
SYMBOL	TEST CONDITIONS	TYP	MAX	UNITS
$I_{\text{FT}}$	$V_{\text{AK}}=50\text{V}, R_{\text{GK}}=10\text{k}\Omega$		20	mA
$I_{\text{FT}}$	$V_{\text{AK}}=100\text{V}, R_{\text{GK}}=27\text{k}\Omega$		11	mA

**DIP-6 CASE - MECHANICAL OUTLINE**



DIMENSIONS				
SYMBOL	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



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### 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

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### DESIGNER SUPPORT/SERVICES

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

- Free quick ship samples (2<sup>nd</sup> 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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