



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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LW-Series Wiper/Washer Control



Keeping in step with the needs of the Transportation Industry, Carling Technologies introduces yet another addition to our L-series family of Control Products, the new Wiper/Washer Control. Offering the best of both worlds, this new product combines the reliability and performance that you've come to expect from the L-Series along with sleek aesthetics to seamlessly integrate into most any dashboard design. The Wiper/Washer Control features a robust packaging design which protects critical components, offers flexibility to meet a variety of customer requirements, while controlling several functions through the use of one single Control Product. Our integrated design provides an added bonus with the cost savings realized from the reduced need for insulated wires and connectors.

Electrical

Current Rating **1 relay**
 8 amps, 14 VDC
 4 amps, 28 VDC
2 relays
 1 amps, 14 VDC
 1 amps, 28 VDC

Terminals187 (7.4mm) Quick Connect terminations standard.

Electrical Properties Reverse polarity protection
 Over voltage protection
 Cold cranking protection according to SAE J1455, Sections. 4.11.1.1.1 and 4.11.1.2.1
 Transient voltage protection which includes load dump and inductive switching according to SAE J1455, sec. 4.11.2.2
 Electrostatic discharge protection according to SAE J1455 Sec. 4.11.2.2.5.1 (Discharge a 150 pf capacitor that has been charged to a potential of 15kV through 150 Ohm resistor.)
 Meets all other EMI/EMC requirements for class C trucks.

Mechanical

Mechanical Vibration . . . Sinusoidal Vibration: 10-55-10 Hz, 0.06" DA, one minute-cycle, three hours/axis
 Random Vibration: Three hours/axis, three mutually perpendicular axes with a test level 4G's.
Frequency Amplitude
 5Hz 0.16 G²/Hz
 100Hz 0.16 G²/Hz
 500Hz -3dB/octave roll-off

Tests were conducted according to SAE J1455, Sec 5.7 and Sec. 4.9.4.
 Shock: MIL-STD-202G Method 213B, Test Condition K, 30G's, 11 ms.

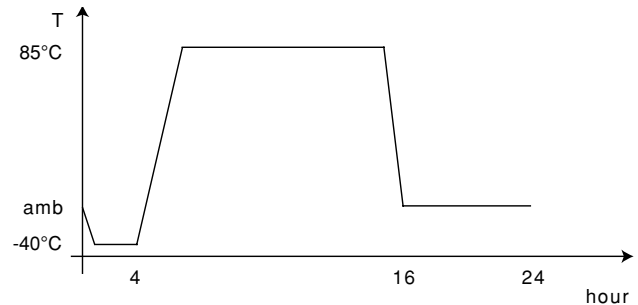
Endurance Test According to SAE J2349, March 97 for windshield washer switch for Trucks, Buses and Multipurpose Vehicles (20,000 cycle minimum).

Physical Characteristics

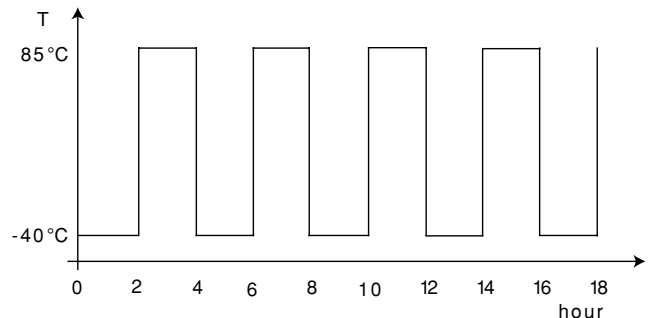
Illumination LED, rated 100,000 hours 1/2 life
 Cover Acetate
 Washer ActuatorSilicone
 Toggle ActuatorNylon 6/6 glass filled
 Bracket Nylon 6/6
 ConnectorNylon 6/6 rated 85° polarized
 Washer FunctionMomentary
 Toggle FunctionMaintained Intermittent
 Operation Momentary
 Weight 44 grams

Environmental

Operating Temperature . . . -25° C to + 85° C
 Temperature CycleAccording to SAE J1455, Sec. 4.1.3.1 (See Figure below)

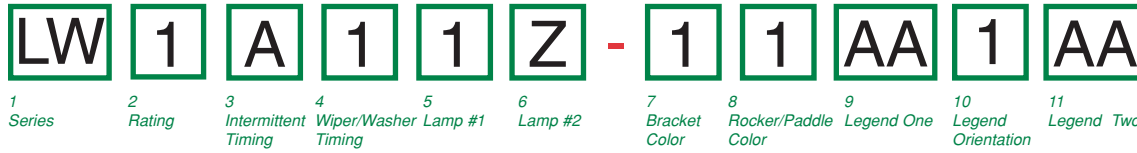


Thermal Shock According to SAE J1455, Sec. 4.1.3.2 (see Fig)



Humidity According to SAE J1455, Sec. 4.2.3 (30 cycles for 8 hrs. with maximum temperature of 85°C and 95% relative humidity.)
 Dust Bombardment According to SAE J1455, Sec. 4.7.3 (with dust concentration of 0.88gm/m³ for 24 hours.)
 Salt Spray MIL-STD-202G, Method 101D for 96 hours.

NOTES:
 For more detailed specifications, consult factory.



1 SERIES	
LW Wiper/Washer Control with six intermittent positions: low, high, wash/wipe	
2 RATING¹	
1	8A, 14VDC (1 relay)
2	4A, 28VDC (1 relay)
3	1A, 14VDC (1 relay)
4	1A, 14VDC (1 relay)
5	1A, 14VDC (2 relay)
6	1A, 28VDC (2 relay)
3 INTERMITTENT TIMING	
A	2-15 seconds
4 WIPER/WASHER TIMING	
1	3 seconds
2	4 seconds
5 LAMP #1 (above wash)	
Z	no lamp
1	green LED
2	red LED
3	amber LED
6 LAMP #2 (above wipe)	
Z	no lamp
1	green LED
2	red LED
3	amber LED

7 BRACKET COLOR	
1	black
8 ROCKER/PADDLE COLOR	
1	black
9 LEGEND #1	
00	No legend
For legend options, see page 69 of this catalog.	
10 LEGEND ORIENTATION	
0	No legend
1	vertical (lamp 1 on top)
2	horizontal (lamp 1 on right)
11 LEGEND #2	
00	No legend
For legend options, see page 69 of this catalog.	

NOTES
 1 Relay coil current is 1A max. Relay must have an arc suppression in parallel with the coil.

