

## RoHS Compatible

### illumec™ 4A - 4F High Temperature Versions Silver Gold

#### Electrical Specifications

Contact resistance	<30m Ω - typ. 10 m Ω
Insulation resistance	>10M Ω
Recommended load	0.5-50mA 24VDC 0.5μ-50mA 24VDC
Contact bounce	<2mS - typically 0.5mS

#### Mechanical Specifications

Standard actuation force (switch)	3.0N typ.
Max. actuation force without cap	100N for 10 sec.
Key travel (switch)	1 mm
Life time (switch)	>10.000.000 cycles

#### Temperature Range

Working temperature	Min. -30°C Max. +85°C*
Storage temperature	Min. -30°C Max. +85°C*
Soldering IEC 68-2-20	Infrared, vapour phase, wave - max. 240°C for max. 40 sec. or max. 260°C for max. 30 sec. Soldering iron - max. 350°C for max. 3 sec. Flux tight.

#### Environmental Endurance IEC 68-2-3

Temperature	+40°C
Humidity	93% RH
Duration	56 Days

#### Temperature Cycling IEC 68-2-14

Temperature limit	Min. -55°C - Max. +85°C
Number of cycles	200
Exposure time at each temperature	10 min.
Recovery time before measurements	16 hrs.
Sealing IEC 529	IP-67
Cleaning	Standard methods - see usage guidelines

#### Vibration Test IEC 68-2-6

Cycles	10
Cycles time	2 hrs.

#### Material Specifications - Switches

Housing	PPS UL94VO	
Actuator	PPS UL94VO	
Sealing + spring	Silicone rubber	
Contact spring	Stainless steel	Stainless steel
	+ 3μAg	+ 1μAu
Fixed contacts	SnCu + 2μNI + 3μAg	SnCu + 2μNI + 1μAu
Terminals	SnCu + 2μNI + 3μSn100	SnCu + 2μNI + 3μSn100

#### Material Specifications - Caps & Bezels

Material	Parts	Temp limit	UL rating
ABS	1A, 1B, 1C, 1D, 1E, 1F, 1H, 1K, 1M, 1N, 1P, 1Q, 1R, 1T, 1U, 1V, 1WA, 1WD, 1WP, 1X, 1ZA, 1ZB, 1ZC.	Max. 65°C	UL94HB
Polycarbonate	All lenses, 3E coloured actuators	Max. 85°C	UL94V1
LCP	Black actuator of 3E	Max. 160°C	UL94VO
PPS	1S, 2S, 1GA/1GC	Max. 160°C	UL94VO
Polyamide	Actuator of Varimec™	Max. 160°C	UL94VO
Legends Adhesion	ISO Class: 1/ASTM Class: 4B DIN EN ISO 2409		

\* LED max. working temperature

Specifications are subject to change without notice.

For updates of products and/or changes of specifications please see [www.mec.dk](http://www.mec.dk)