

RoHS Compatible

	RB Low Temperature Versions		RA High Temperature Versions	
	Silver	Gold	Silver	Gold
Electrical Specifications				
Contact resistance	Max. 100 m Ω (initially)		Max. 100 m Ω (initially)	
Insulation resistance	>10 M Ω		>10 M Ω	
Recommended load	Min. 0.5 mA	Min. 0.5μ A	Min. 0.5 mA	Min. 0.5μ A
	Max. 250 mA - 120 V - 9W AC - 6W DC		Max. 250 mA - 120 V - 9W AC - 6W DC	
Max. current in non switching state	0.5 A		0.5 A	
Contact bounce	Max. 10 ms		Max. 10 ms	
Dielectric strength between adjacent contacts	1000 V for 2 min.		1000 V for 2 min.	
Insulation resistance between adjacent contacts	5 X 10 ¹³ Ω		5 X 10 ¹³ Ω	
Capacitance between adjacent contacts	0.5 pF		0.5 pF	
Mechanical Specifications				
Standard actuation force (switch)	typ 2.5N		typ 2.5N	
Max. actuation force without cap	100N for 10 sec.		100N for 10 sec.	
Key travel (switch)	1.8 mm		1.8 mm	
Life time	Momentary 1.500.000 cycles Alternate 500.000 cycles		Momentary >10.000.000 cycles Alternate 5.000.000 cycles	
Temperature Range				
Working temperature	Min. -40°C Max. +75°C		Min. -40°C Max. +160°C	
Storage temperature	Min. -65°C Max. +85°C		Min. -65°C Max. +160°C	
Soldering IEC 68-2-20	Wave - max 260°C for max. 10 sec., please refer to usage guidelines Soldering iron - max. 350°C for max. 3 sec. Flux tight.			
Environmental Endurance IEC 68-2-3				
Temperature	+40°C		+40°C	
Humidity	93% RH		93% RH	
Duration	56 Days		56 Days	
Sealing IEC 529	IP-54		IP-54	
Cleaning	Standard methods such as water and soap (not immersed)			
Material Specifications - Switches				
Housing and actuator	Glass fiber filled Polycarbonate UL94V1		LCP UL94V0	
Switch spring	Stainless steel		Stainless steel	
Key spring	Stainless steel		Stainless steel	
Latch pin	Stainless steel		Stainless steel	
Fixed contact	SnCu + 2μNi + 3μAg	SnCu + 2μNi + 3μAu	SnCu + 2μNi + 3μAg	SnCu + 2μNi + 3μAu
Moving contact	Stainless steel + 3μAg	Stainless steel + 3μAg+1μAu	Stainless steel +3μAg	Stainless steel + 3μAg+1μAu
Terminals	SnCu + 2μNi + 3μSn100		SnCu + 2μNi + 3μSn100	
Contact lubricant	Special protective lubricant Klüber Barrierta I EL Fluid			
Material Specifications - All Caps & Bezels	ABS (standard) UL94HB			
Temperature limit	Max. +65°C		Max. +65°C	
Tampon Printing	According to ISO Class: 1/ASTM Class.: 4B		According to ISO Class: 1/ASTM Class.: 4B	

unimec™ LEDs

Part Nos.	16920/16921			16922			16923			16924			
	G	Y	R	G	Y	R	G	Y	R	G	Y	R	
Colour (G= Green, Y= Yellow, R= Red)													
Colour Codes	02	04	08	02	04	08	20	40	80	23	45	88	
Absolute Maximum Ratings (Ta=25°C)													
Power	mW	100	100	100	135	135	135	70	60	60	150	130	300
Current forward	mA	30	30	30	30	30	30	20	20	20	40	40	90
Forward peak current	mA	50	50	50	90	90	90	60**	60**	60**	500	500	1000
Voltage reverse	V	5	5	5	5	5	5	3	3	3	12	12	5
Operating temperature	°C	-25 - +100			-55 - +100			-25 - +85			-55 - +100		
Storage temperature	°C	-25 - +100			-55 - +100			-30 - +100			-55 - +100		
Soldering temperature	°C	+245 for max. 3 sec.			+300 for max. 3 sec.			+260 for max. 5 sec.			+300 for max. 3 sec.		
Electrical-Optical Characteristics (Ta=25°C)													
Voltage Forward	Typ. V	2.0	2.0	2.0	2.1	2.2	2.3	2.1	2.1	2.0	2.1*	2.3***	2.4***
	Max. V	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	2.5*	2.5***	3.8***
Current reverse	μA	100	100	100	100	100	100	10	10	10	10	10	10
Wave length	nm	560	590	660	565	585	635	563	585	650	570	587	635
Spread	Ønm	10	10	10	10	10	10	40	40	40	25	45	45
Spread angle	degree	20	20	20	45	45	45	45	45	45	80	90	55
Luminous Intensity	Min. mcd	1	1	0.8	1.5	2.5	2.5	9.0	5.6	5.6	71****	71****	100****
	Typ. mcd	2	3	1.6	2.5	3.0	5.0	25	16	16	112****	112****	160****
Orientation	The longer pin is the anode, the shorter is the cathode.												

*If = 20mA, **Pulse width 1ms Duty cycle 1:5, ***If = 50mA, ****Luminous Flux mlm

Specifications are subject to change without notice.