

Datasheet

Membrane switches with SideLED illumination

- > Homogeneous illumination of key surfaces, symbols and frames
- > Unlimited colour selection
- > Key illumination with colour change possible
- > Illumination mounted on printed circuit board, rear side can be used for customised assembly



LED technology, combined with a sophisticated design, enables the realisation of illuminated membrane keypads that are only slightly thicker than the widely used EL lighting.

A long service life, high brightness and the possibility of individual key control open up completely new areas of application for the membrane keypad. Individually adaptable light diffusion elements enable the illumination of almost all shapes and surfaces.

Keyboards with SideLED illumination can be realised from an installation height of approx. 2.2 mm.

Technical data of the SideLED illumination*

Total thickness	From approx. 2.2 mm
Structure total thickness	Foil structure incl. cover foil 1.9 mm + PCB thickness from 0.3 mm + Adhesive on the reverse side if required
LED Colour	Yellow, Orange, Green, Red, White, Blue, RGB
Key size	At least \varnothing 8 mm
Switching cycles	1 million operations
Operating temperature	-20°C to +80°C (for embossing up to +70°C)
IP protection class according to DIN 60529	After consultation

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Technical data SideLEDs*

H+K-Art-Nr.	Color	Lens	V _F			Wavelength [nm]			I _V (mcd) @20mA				Viewing Angle [°]
			I _F [mA]	Typ [V]	Max. [V]	λ _D	λ _P	Δλ	I _F [mA]	Min. [mcd]	Typ. [mcd]	Max. [mcd]	
34201265	White	Diffused	20	3.2	3.7	x=0.3 y=0.28	x=0.3 y=0.28		20	710		1400	120
34201252	Green	Clear	20	3.2	3.7	528	523	33	20	710		1800	120
34201250	Red	Clear	20	2.2	2.5	625	630	19	20	450		1120	120
34201274	Blue	Clear	20	3.2	3.7	470	465	25	20	180		450	120
34201296	Orange	Clear	20	2	2.35	606	610	16	20	90		355	120
34201251	Yellow	Clear	20	2.2	2.5	590	595	18	20	450		1120	120
34201362	Red	Clear	20	2	2.4	622	632	20	20	350	450		120
	Green			2.8	3.4	523	515	30		600	850		
	Blue			3	3.4	465	460	20		100	140		

Absolute Maximum Ratings (Values T _a = 25°C)							
Product	Color	P _d [mW]	I _F [mA]	I _{FP} [mA]	T _{OP} [°C] ³	T _{ST} [°C]	
34201265	White	120	30	I _{FP} [mA]	- 40 ... + 100	- 40 ... + 100	
34201252	Green	75	30	300 ¹	- 40 ... + 100	- 40 ... + 100	
34201250	Red	125	50	100 ¹	- 40 ... + 100	- 40 ... + 100	
34201274	Blue	75	30	300 ¹	- 40 ... + 110	- 40 ... + 110	
34201296	Orange	80	30	500 ¹	- 40 ... + 100	- 40 ... + 100	
34201251	Yellow	50	50	100 ¹	- 40 ... + 100	- 40 ... + 100	
34201362	Red	45	20	30 ²	- 40 ... + 85	- 40 ... + 85	
	Green	56					
	Blue	60					

* All technical data are not guaranteed properties, but may deviate depending on the customer-specific design.

¹ tp≤10μs; D=0.005; T=2ms

² tp≤100μs; D=0.1; T=1ms

³ At temperatures T_a > 25°C, the derating of the LEDs must be observed.