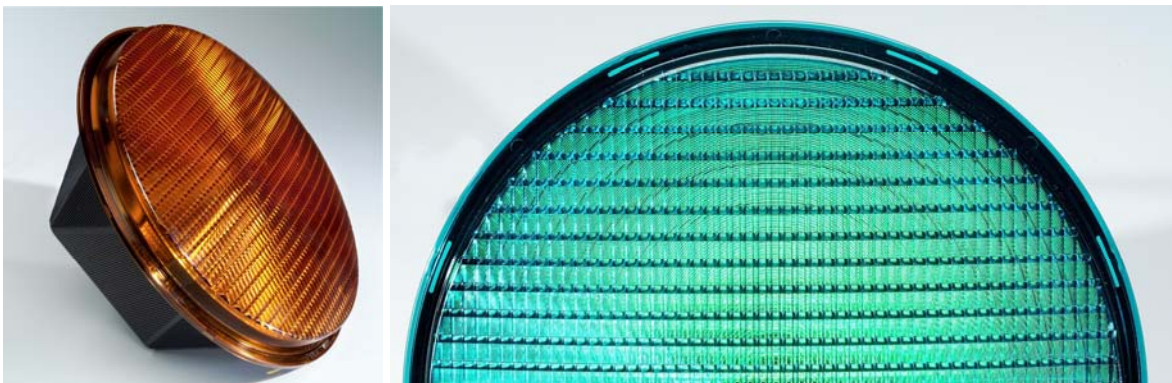


FUTURLED3 TRAFFIC SIGNAL MODULES 12V DC / 24V AC/DC – ALTERNATIVE POWER SUPPLIES

THE STANDARD FOR HIGHEST OPTICAL PERFORMANCE – EN12368

With more than 1,500,000 FUTURLED3 units sold, SWARCO FUTURIT impressively underscores its outstanding position and know-how in LED signalling technology. Over 10 years of experience in the development and manufacture of LED-based signals allow us to offer highly reliable, state-of-the-art products. The central light source combined with the dual lens system enables a brilliant and very uniform signal display.



FUTURLED 3: the most successful generation of LED-based traffic signal modules

FUTURLED3: 12V DC / 24V AC/DC – EN12368 ALTERNATIVE POWER SUPPLIES

SWARCO FUTURIT recognizes the increasing importance of alternative power supplies such as solar panels and fuel cells and therefore designed its high performance LED modules to comply with these new applications.



FUTURLED3: custom-made masks available

KEY BENEFITS

- no LED dots visible, very uniform signal glow – central light source
- high anti-phantom performance
- lowest power consumption and brilliant light output
- all products traceable by serial number
- custom-made masks display any symbol
- life cycle > 5 years
- optimum heat balance reduces degradation to a minimum
- automatic light compensation in case of diode failure
- proven technology
- also available with clear lens
- compatible with standard-conforming signal head housing

SWARCO FUTURIT is ISO 9001:2000 certified and world's no. 1 manufacturer of high quality traffic signals.

FUTURLED3: TRAFFIC SIGNAL MODULES 12V DC / 24V AC/DC – EN12368

TECHNICAL DETAILS

FUTURLED 3	12V DC		24V AC/DC	
	Ø 210 mm	Ø 300 mm	Ø 210 mm	Ø 300 mm
Diameter				
Luminous intensity acc. to EN12368	red > 200 cd amber > 200 cd green > 200 cd	red > 400 cd amber > 400 cd green > 400 cd	red > 200 cd amber > 200 cd green > 200 cd	red > 400 cd amber > 400 cd green > 400 cd
Optical performance acc. to EN12368	B2/1, W	B3/1, N	B2/1, W	B3/1, N
Colour acc. to EN12368	red 613.5-631 nm amber 585 - 597 nm green 498.5-508 nm white 5000 – 7000 K			
Uniformity of Luminance acc. to EN12368	better than 1 : 2.5			
LED type	High Flux			
Phantom light class	Class 4		Class 5	
Power Factor	> 0.9			
Operating Voltage	12V DC (+10%; - 15%)		24V AC/DC (+ 10%; - 15%)	
Frequency	-		24V AC: 50 Hz (+/- 5 %)	
Power consumption	red 4 W amber 4 W green 4 W white 4 W		red 12 W amber 12 W green 12 W white 12 W	
EMC	acc. EN 50293			
Cable	2 x 0.75 mm ² ; 1 m			
Ambient temperature range: acc. to EN12368	Class A, B, C			
Protection Class	Safety Class II acc. to EN 60598			
Tightness	IP 65 acc. to EN 60598			
Impact resistance	Class IR3; acc. to EN 60598-1			
Material of lens / housing	UV-stabilized polycarbonate			
Weight	< 1.0 kg	< 1.5 kg	< 1.0 kg	< 1.5 kg
Dimensions (incl. front lens)	Ø 210 x 117 mm	Ø 300 x 149 mm	Ø 210 x 117 mm	Ø 300 x 149 mm

YOUR LOCAL CONTACT



SWARCO FUTURIT

SWARCO FUTURIT is the leading global player in LED-based signalling technology. The company specializes in traffic lights, variable message signs, in-road markers and railway signals that all work with the energy-saving long-life technology of light-emitting diodes (LEDs).

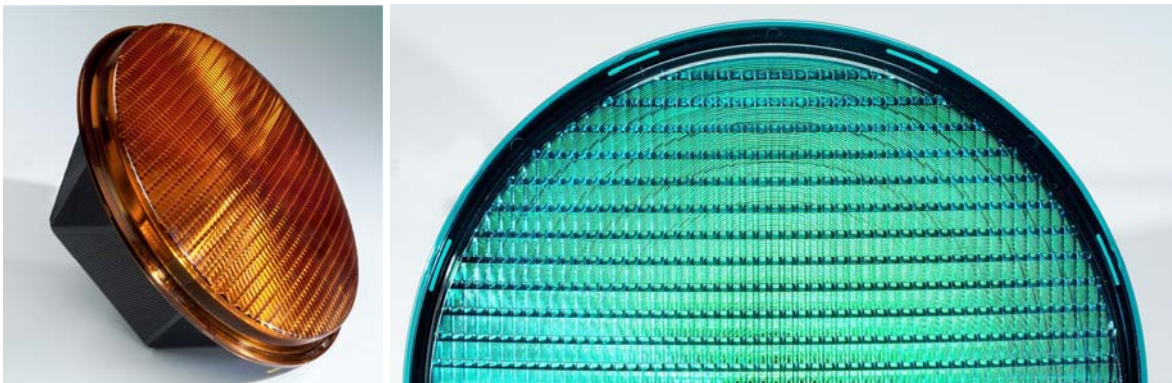
Customers in over 60 countries around the world rely on the outstanding SWARCO FUTURIT quality made in Austria and helping to improve traffic fluidity and road safety.



FUTURLED3 TRAFFIC SIGNAL MODULES 230V AC

THE STANDARD FOR HIGHEST OPTICAL PERFORMANCE – EN12368

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FUTURLED 3: the most successful generation of LED-based traffic signal modules

FUTURLED3: 230V AC – EN12368



FUTURLED3: custom-made masks available

KEY BENEFITS

- no LED dots visible, very uniform signal glow – central light source
- highest anti-phantom performance (class 5)
- lowest power consumption and brilliant light output
- all products traceable by serial number
- custom-made masks allow any symbol display
- life cycle > 5 years
- optimum heat balance reduces degradation to a minimum
- automatic light compensation in case of diode failure
- proven technology
- dimming function available
- VDE-compliant FUTURLED3 modules available
- also available with clear lens
- modules compliant to local norms available (UK, South Africa)
- optical monitoring available
- compatible with standard-conforming signal head housing

SWARCO FUTURIT is ISO 9001:2000 certified and the world's no. 1 manufacturer of high quality traffic signals.

FUTURLED3: 230V AC – EN12368

TECHNICAL DETAILS

FUTURLED 3	230V AC		
Diameter	Ø 100 mm	Ø 210 mm	Ø 300 mm
Luminous intensity acc. to EN12368	Not applicable	red > 200 cd amber > 200 cd green > 200 cd	red > 400 cd amber > 400 cd green > 400 cd
Optical performance acc. to EN12368	Not applicable	B2/1, W	B3/1, N
Colour acc. to EN12368	red 613.5 - 631 nm, amber 585 - 597 nm, green 498.5-508 nm, white 5000 – 7000 K		
Uniformity of Luminance acc. to EN12368	Not applicable	better than 1 : 2.5	better than 1 : 2.5
LED type	High Flux		
Phantom light class	Not applicable	Class 5	
Power Factor	> 0,9		
Operating Voltage bright mode/dimmed mode	196 – 265 V / n.a.	196 – 265 V / 160 V – 180 V (light output is reduced to app. 50 % of normal level if the input voltage is decreased)	
Frequency	45 – 55 Hz		
Power consumption: typically bright mode / dimmed mode	red 5 W / n.a. amber 5 W / n.a. green 5 W / n.a. white 5 W / n.a.	red 8 W / 4 W amber 8 W / 4 W green 9 W / 4,5 W white 9 W / 4,5 W	red 8 W / 4 W amber 8 W / 4 W green 9 W / 4,5 W white 9 W / 4,5 W
EMC	acc. EN 50293		
Cable	2 x 0.75 mm ² ; 1 m		
Ambient temperature range acc. to EN12368	Class A, B, C		
Protection Class:	Safety Class II acc. to EN 60598		
Tightness	IP 65 acc. to EN 60598		
Impact resistance	Class IR3; acc. to EN 60598-1		
Material of lens / housing	UV-stabilized polycarbonate		
Weight	< 0.25 kg	< 1.0 kg	< 1.5 kg
Dimensions (incl. front lens)	Ø 108 x 72 mm	Ø 210 x 117 mm	Ø 300 x 149 mm

YOUR LOCAL CONTACT



SWARCO FUTURIT

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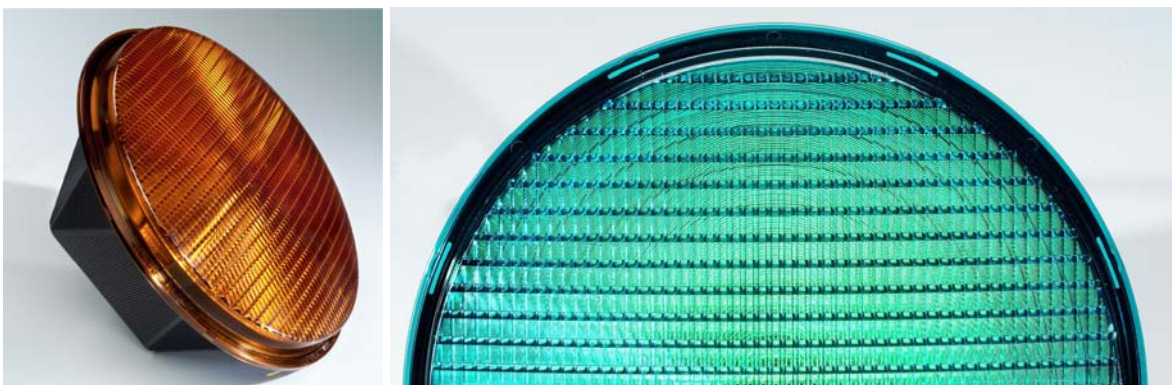
Customers in over 60 countries around the world rely on the outstanding SWARCO FUTURIT quality made in Austria and helping to improve traffic fluidity and road safety.



FUTURLED3 TRAFFIC SIGNAL MODULES 40V / 42V AC – LOW VOLTAGE SAFETY

THE STANDARD FOR HIGHEST OPTICAL PERFORMANCE – EN12368

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FUTURLED 3: the most successful generation of LED-based traffic signal modules

FUTURLED3: 40V / 42V AC – EN12368

Low voltage safety systems (≤ 42 VAC) have become an important issue in traffic signalling. Better monitoring and increased safety for the people directly working at the traffic signals on the street are the main reasons for this trend. FUTURLED3 LED module versions are available as low voltage versions.



FUTURLED3: custom-made masks available

KEY BENEFITS

- no LED dots visible – central light source
- highest anti-phantom performance (class 5)
- lowest power consumption and brilliant light output
- all products traceable by serial number
- custom-made masks display any symbol
- life cycle > 5 years
- optimum heat balance reduces degradation to a minimum
- automatic light compensation in case of diode failure
- proven technology
- dimming function available (ASTRIN Cl. II-Versions, 42V)
- VDE 0832-compliant FUTURLED3 modules available (OCIT versions, 40V)
- also available with clear lens
- optional: optical monitoring available
- compatible with standard-conforming signal head housing

SWARCO FUTURIT is ISO 9001:2000 certified and world's no. 1 manufacturer of high quality traffic signals.

FUTURLED3: 40V / 42V AC – EN12368

TECHNICAL DETAILS

FUTURLED 3		40V / 42V AC		
Diameter	Ø 100 mm	Ø 210 mm	Ø 300 mm	
Luminous intensity acc. to EN12368	Not applicable	red > 200 cd amber > 200 cd green > 200 cd	red > 400 cd amber > 400 cd green > 400 cd	
Optical performance acc. to EN12368	Not applicable	B2/1, W	B3/1, N	
Colour acc. to EN12368	red 613.5 - 631 nm, amber 585 - 597 nm green 498.5-508 nm, white 5000 – 7000 K			
Uniformity of luminance acc. to EN12368	Not applicable	better than 1 : 2.5	better than 1 : 2.5	
LED-Type	High Flux			
Phantom light class	Not applicable	Class 5		
Power Factor	> 0,9			
Operating Voltage – bright mode	40V AC (+10 %; - 15 %) - OCIT		40V AC (+10 %; -15 %) – OCIT 42V AC (36V – 50V AC) – ASTRIN Class II	
dimmed mode	n.a.		31V AC (+10% ; - 15%) – ASTRIN Class II	
Frequency	50 Hz (+/- 5 %)			
Power consumption - typically bright mode / dimmed mode	red, amber, green, white: 5 W / n.a.	According to OCIT-/ASTRIN Cl. II-specifications		
EMC	acc. EN 50293			
Cable	2 x 0.75 mm ² ; 1 m			
Ambient temperature range: acc. to EN12368	Class A, B, C			
Protection Class	Safety Class II acc. to EN 60598			
Tightness	IP 65 acc. to EN 60598			
Impact resistance	Class IR3; acc. to EN 60598-1			
Material of lens / housing	UV-stabilized polycarbonate			
Weight	< 0.25 kg	< 1.0 kg	< 1.5 kg	
Dimensions (incl. front lens)	Ø 108 x 72 mm	Ø 210 x 117 mm	Ø 300 x 149 mm	

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