



Silux 1.230D signal heads

## Dimmable LED technology for 230-V traffic lights

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# Saving energy while improving traffic safety? Made easy with Silux 1.230D!

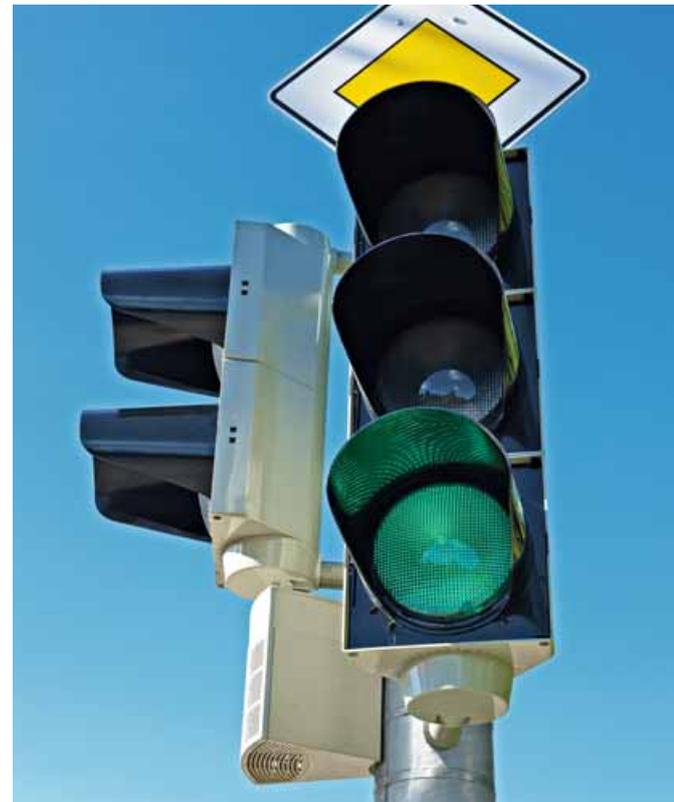
With Silux® 1.230D LED signal heads, local authorities stand to benefit in every respect as they will save costs while improving traffic safety at the same time. In comparison to conventional signal lamps, LED signal heads need up to 90% less power and have a much longer service life, ensuring a high level of operational reliability of the traffic signal installations. In short: a boon for every city treasurer.

But what is more, Silux 1.230D signal heads boast truly brilliant optical properties. They totally eliminate the dangerous phantom light effect and ensure perfect signal visibility even in case of low sun position – for a significant improvement in traffic safety. To ensure that no blooming effect blurs the symbols at night and to minimize dazzling, the light intensity of the signal heads can be reduced. For this dimming function, Siemens controllers can be retrofitted with specially developed LED dimming kits. The impressive list of advantages of Silux 1.230D includes also a high level of electromagnetic immunity and optimum interaction with Siemens controllers.

## Cost-saving conservation measure

Retrofitting 25 traffic signal installations in a medium-sized town with LED technology saves in excess of 350,000 kWh of electric power – every year. This will not only save the town a lot of money, but also make a considerable contribution to carbon reduction. Equipping all traffic signals with LED signal heads would make a sizable difference in a given country's overall energy situation. For Germany, the achievable effect has already been calculated: If all intersections in Germany were equipped with the new technology, the power demand of the signal heads would be cut from today's 200 megawatts to a mere 16 megawatts, a reduction corresponding to the entire output of a small power station. An appreciable contribution to climate protection.





### Symbol masks

Silux 1.230D LED signal heads can be equipped with various removable symbol inserts, which are realized as masks and can be fitted into the detachable front lens. Hence rotating or exchanging the symbols can be done right on site. Upon request, non-standard symbols are available at short notice.

### Safety features

Every Silux 1.230D LED light source is equipped with an electronic monitoring circuit designed for optimum interaction with Siemens controllers. The circuit permanently monitors and checks the power and voltage values of the LEDs. If the actual values are below or above the pre-set thresholds, the input current is interrupted immediately. The brilliant LED optics of the Silux signal heads prevent the occurrence of colored phantom light and achieve the highest phantom class – class 5 – for virtually all colors and sizes.

### Compatibility with controllers

Silux 1.230D signal heads operate with all 230-V versions of the Sitrtraffic C800V/ C900V family of traffic controllers from Siemens. When equipped with our specially developed LED dimming kits, the controllers can be used to reduce the signal heads' light intensity at night (dimmed mode).

### Compatibility with housings

Silux 1.230D signal heads are integrated in the Siemens signal head housing door, ensuring compatibility with all Siemens signal head housings and enabling the easy and cost-effective upgrading of existing signal head installations.



# Technical data

## Optical properties, in conformity with DIN EN 12368

Optical values according to EN 12368/DIN 67527-1		Silux 1.230D/size 200 mm	Silux 1.230D/size 300 mm
Luminous intensity distribution – class		B2/2	B3/2
Axial luminous intensity – typical value	red	> 200 cd	> 400 cd
	amber	> 200 cd	> 400 cd
	green	> 200 cd	> 400 cd
Relative intensity in dimmed mode (typical value)	red/amber	40%	40%
	green/white	35%	35%
Radiation characteristic		W	N
Uniformity of luminance		1:10	1:15
Color coordinates according to DIN EN 12368	red	613–631 nm	613–631 nm
	amber	585–597 nm	585–597 nm
	green	489–508 nm	489–508 nm
Phantom class		5 (red, amber, green)	5 (red, green), 4 (amber)
Symbol class		S1	S1

## Electrical and mechanical properties

Operating voltage	230 V/50 Hz		Impact resistance	IR 3	
Power consumption (watts)	normal mode typ.	dimmed mode typ.	Ambient temperature	–40 °C to +60 °C	
	red	16	10	Relative humidity	20%–95%
	amber	13	9	Lenses	system-specific colorless diffusing lenses
	green	13	9	Standard versions of symbols	as symbol masks
	white	13	9	Housing colors	black RAL 9005 fir green RAL 6009 pebble gray RAL 7032
Power factor	> 0.9				
EMC	according to EN 50293				
Degree of protection	IP 65				

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Order No. E10003-A800-A104-V1-7600  
Printed in Germany  
Dispo No. 22300 K No. 7596  
DEI 25/26024 313672 02103.  
Subject to change without prior notice