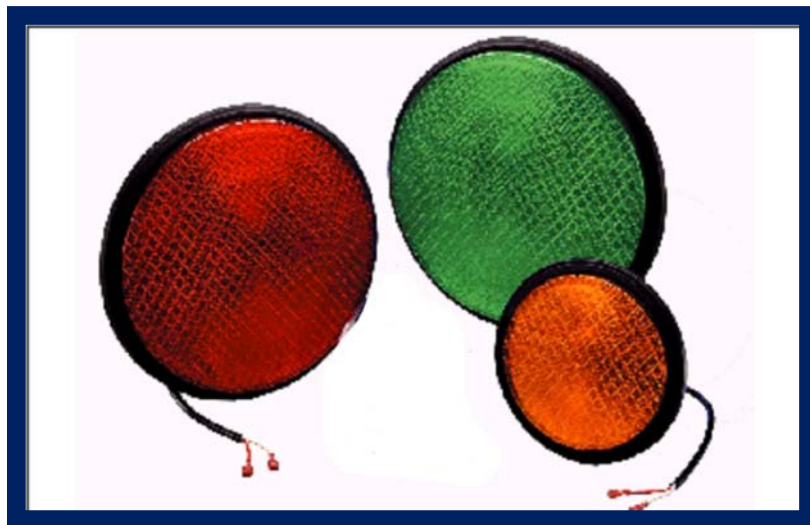


LED Traffic Signal

433 Series



230VAC

Features:

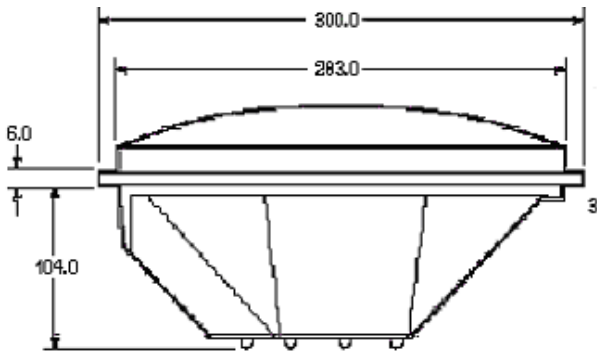
- Clustered LED's as Light Source
- Sealed for Life Unit
- Durable Materials
- Rim Dimensions Matching Existing Housings

Benefits:

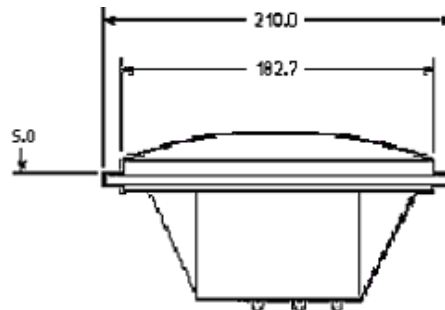
- Low Energy Consumption
- Uniform Luminance of the Front Lens
- Long and Reliable Service Life
- Easy Installation in the Door of a Signal Housing

A fully contained low wattage LED Traffic Signal Module meeting European specification EN12368 class A2/1 type W. The module is primarily intended for use as a retrofit unit for traffic signals that are currently equipped with incandescent, low voltage Krypton or Halogen light sources. The LED Traffic Signal Module comprises a high flux LED light source, Fresnel lens, and tinted or not tinted front lens. The Fresnel lens is sealed to the housing to create a dust and waterproof system. Key features of the signal are very low power consumption and a smooth, uniform appearance when illuminated. The optics and drive circuits are designed so that the failure of a single LED will neither create a dark spot, nor reduce the signal intensity.

Dimensions:



300 mm SIGNAL MODULE



210 mm SIGNAL MODULE

Optical Characteristics:

at $T_A = 25\text{ }^\circ\text{C}$ (Typical values 210mm unless otherwise stated)

Parameter	Symbol	Red	Amber	Green	Units
Light distribution (210mm & 300mm)		A2/1 type W	A2/1 type W	A2/1 type W	
light Intensity	I_v	300	300	400	cd
Dominant Wavelength	λ_d	615-631,5	585-597	498,5-508	nm
Luminance Uniformity		>1:10	>1:10	>1:10	$L_{min}:L_{max}$
Phantom Class tinted lens		3	3	5	$I_s:I_{ph}$
Phantom Class non tinted lens		1	1	1	$I_s:I_{ph}$

Electrical Characteristics:

at $T_A = 25\text{ }^\circ\text{C}$

Parameter	Symbol	Red	Amber	Green	Units
Power Consumption	P	12	12	12	W
Voltage ^[1]	V	230			V
Voltage Range	V	196-253			V
Minimum Power Factor		According to EN 61000-3-2			
Maximum THD		According to EN 61000-3-2			
Insulation Class		II (IEC 598-1 Section 1.2.23)			
EMC		According to EN 50276			
Transient Protection		TBD			
Controller Assembly Compatibility		TBD			

Notes:

1. Power consumption minimum values vary by controller.

Thermal Characteristics: (All Part Numbers)

Parameter	Symbol	210 mm	300 mm	Units
Operating Temperature ^[2]	T _{OP}	-40 to +60		°C
Thermal Resistance, Junction to Ambient ^[3]	R _{ΘJ-A}	2,5	2	K/W

Notes:

2.Refers to the ambient temperature range when power is applied to the module.

3.At 60 _ C based on total dissipated system power.

Mechanical Data:

Parameter	210 mm	300 mm	Units
Minimum Weight	1,53		kg
Vibrations	IEC 68-2-34		
Impact Lens	EN 60598-1 Clause 4.13.4,Class IR3		
Protection Grade	EN 60529 test 13 and 14,rating IP 65		
Relative Humidity	Up to 95%		
Flammability	V-0 (US requirement)		
Minimum Cable Length Outside of Housing	1		m
Symbols	Painted on the outer lens		
Packing	12 signals per box	6 signals per box	

Part Numbers					
Clear lens <input type="checkbox"/>			Coloured lens <input type="checkbox"/>		
<input type="checkbox"/>	210mm	300mm <input type="checkbox"/>	<input type="checkbox"/>	210mm	300mm <input type="checkbox"/>
<input type="checkbox"/>	Red 143309	143306 <input type="checkbox"/>	<input type="checkbox"/>	Red 143312	143315 <input type="checkbox"/>
<input type="checkbox"/>	Amber 143310	143307 <input type="checkbox"/>	<input type="checkbox"/>	Amber 143313	143316 <input type="checkbox"/>
<input type="checkbox"/>	Green 143311	143308 <input type="checkbox"/>	<input type="checkbox"/>	Green 143314	143317 <input type="checkbox"/>
<input type="checkbox"/>			<input type="checkbox"/>	Blue/Green 143375	143345 <input type="checkbox"/>

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Subject to change