

# VIMALUX

A brighter vision

## RAZO



**MODERN SUPER SLEEK PROFILE**

RAZO™ design and appearance is first and foremost sleek and contemporary. Paired with its many mechanical features and unique efficiency, RAZO is the defining design for current and future urban- and cityscapes.



**OPTIMIZED FOR EASY MAINTENANCE**

RAZO™ offers tool-free and immediate access to all internal active parts of the luminaire. The unique gear access system makes upgrades and site repair a feasible option. The hinge system makes it possible to replace both service electronics, as well as LEDs without unmounting the light.

Top part carries both the LED module and the Electronic gear tray. It can be open without tool and be extracted for operation of maintenance or it can be replaced with a new one directly without re-wiring by keeping the bottom part installed.



Electrical connection CLASS II : Neutral /Phase are connected to safety switch; for Class 1 earth wire to be connected on earth stud in housing. DALI 2 incoming wiring is connected to a separate termination block.

Gear with TCI/OSRAM DALI 2 programmable driver, SPD and EMI as per request.

Level gauge for precise and easy horizontal installation.

SILICON GASKET

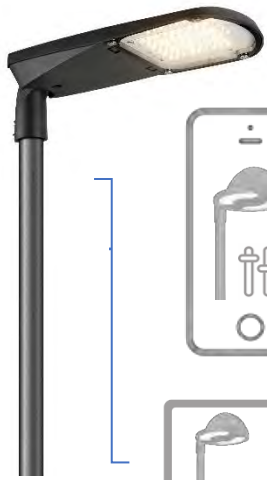
Housing is made of very corrosion resistant die-cast aluminum. Polyester powder coated painting after chemical washing treatment.

Mounting with two stainless steel bolts (extra long bolts for small column can be ordered with luminaire).

Spigot made of die-cast aluminum, standard in same color as body. Universal post top / side entry spigot for  $\varnothing$  60mm/76mm/50mm.

Flat toughened glass to prevent upward light. Fixed to the frame with metal clips for easy replaceability. Very high light transmission to optimise the Light Output Ratio.





**IN COMPLETE CONTROL - ANYWHERE YOU ARE**

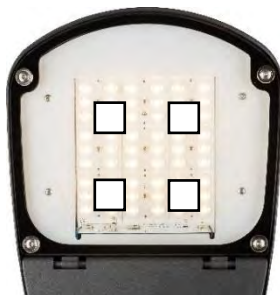
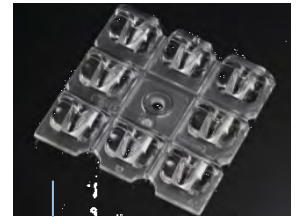
RAZO™ comes fully equipped with an NFC programmable DALI2 LED driver with advanced local and standalone dimming and control features like Astro dimming, Constant Lumen Output and much more.

Combined with optional pre-installed NEMA or ZHAGA socket, any wireless Lighting Control Unit can be added for centralized Control Management Systems.

For remote and central Control Management System, RAZO works with any open Lighting Control and IoT Smart City Solution including the VIMALUX system.

RAZO is also perfect for the Felicity patented dynamic dimming system.

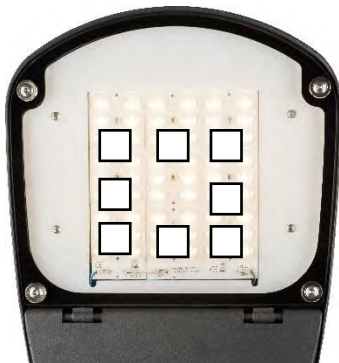
The innovative and highly flexible lighting system of RAZO™ cover all P Category Roads and V Category Roads both in terms of power as well as optics. In addition, the LED modules are easily replaceable and thus a P CAT RAZO can easily be converted to a V CAT luminaire and Vice Versa.



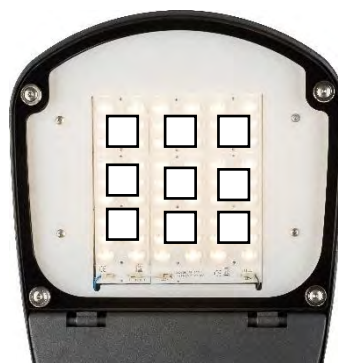
**RAZO-S-12**  
12 pcs. High Power LEDs  
12W-20W Optional Power Setting



**RAZO-S-20**  
20 pcs. High Power LEDs  
17W-40W Optional Power Setting



**RAZO-M-42**  
42 pcs. High Power LEDs  
40-70W Optional Power Setting



**RAZO-M-60**  
60 pcs. High Power LEDs  
80-110W Optional Power Setting



**RAZO-M-72**  
72 pcs. High Power LEDs  
120-140W Optional Power Setting



## LUMEN AND EFFICIENCY @4000K

MODEL	LED QTY	LED CURRENT SETTING mA	SYSTEM POWER SETTING** W	LUMEN*			Efficiency (4000K) LM/Watt
				4000K	3000K	2700K	
RAZO-S-12	12	300	13	1300	1200	1100	110
		400	16	1900	1800	1600	118
		500	21	2600	2500	2200	123
'RAZO-S-20	20	250	17	2100	2000	1800	125
		350	23	3100	3000	2700	145
		600	38	5200	4900	4400	137
		650	40	5400	5100	4600	134
RAZO-M-42	42	400	50	7200	6900	6300	147
		450	63	8500	8200	7600	140
		550	70	9600	9400	8400	135
RAZO-M-60	60	450	82	12000	11500	10800	141
		500	94	13500	13000	12200	142
		600	109	15000	14500	14000	143
		650	115	15700	15200	14000	
RAZO-M-72	72	550	120	16100	15300	13975	135
		650	140	18000	17800	15953	129

\*Typical output -Lumen result will vary up to +/- 3%.

\*\* Power consumption tolerance +/- 1%.



## LIFETIME AND WARRANTY

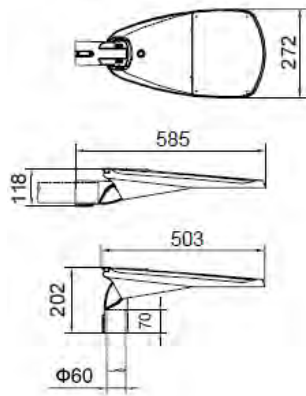
CALCULATION	L90@25° B10	L80@50° B10	STANADARD WARRANTY
LLMF	>118.000 hours	>90.000 hours	10 Years
TM-21	>118.000 hours	>90.000 hours	



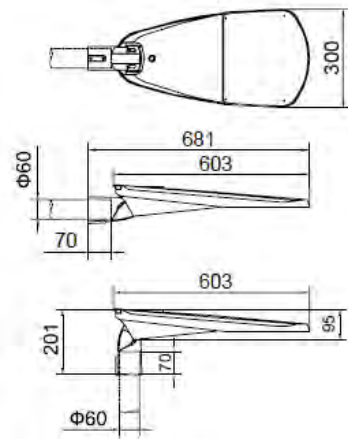
DIMENSIONS AND WEIGHT

MODEL	LENGTH mm	HEIGHT mm	WIDTH mm	WEIGHT Kg
RAZO-S-12	603	131	300	5.7
RAZO-S-20	603	131	300	5.7
RAZO-M-42	791	131	381	7.9
RAZO-M-60	791	131	381	7.9

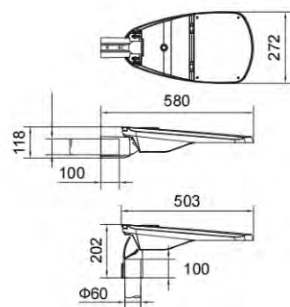
RAZO-S



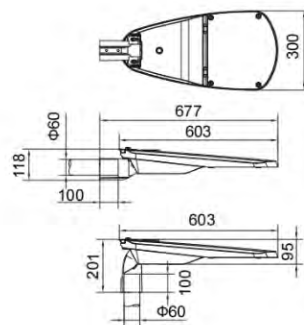
RAZO-M



RAZO-ST



RAZO-MT



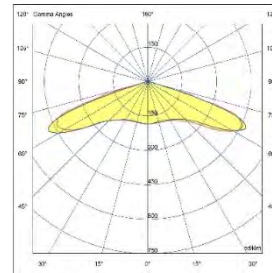
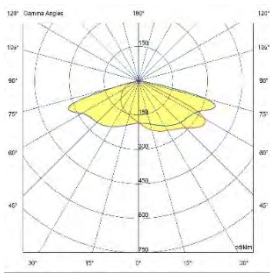


OPTICS

Park, Area Lighting

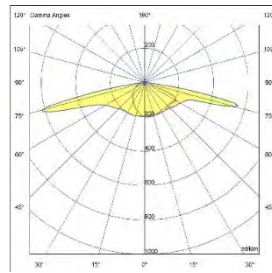
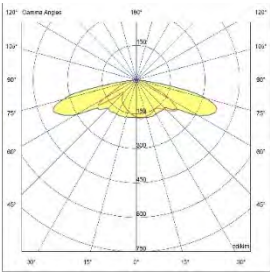
AU/NZ P Cat

L9 (NZ)



L5

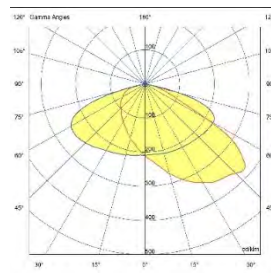
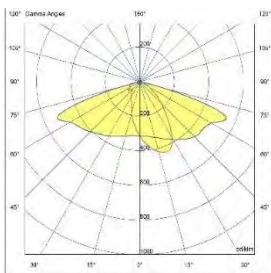
L8



L6(AU)

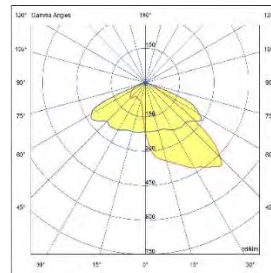
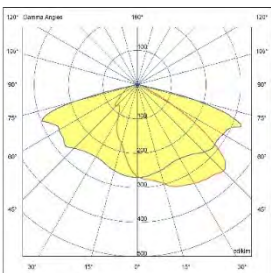
Road Lighting – Short poles distance, low glare , EU standard

L2



T4

L3



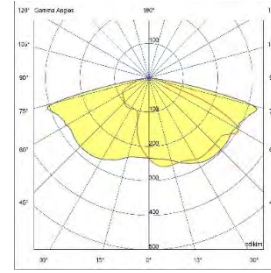
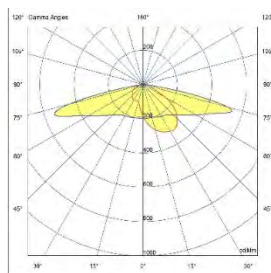
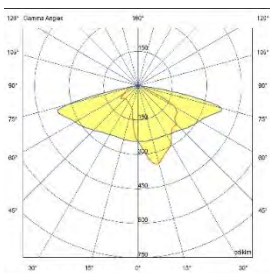
TEW (wet)

Road Lighting – Long poles distance, V Cat

L7

L12

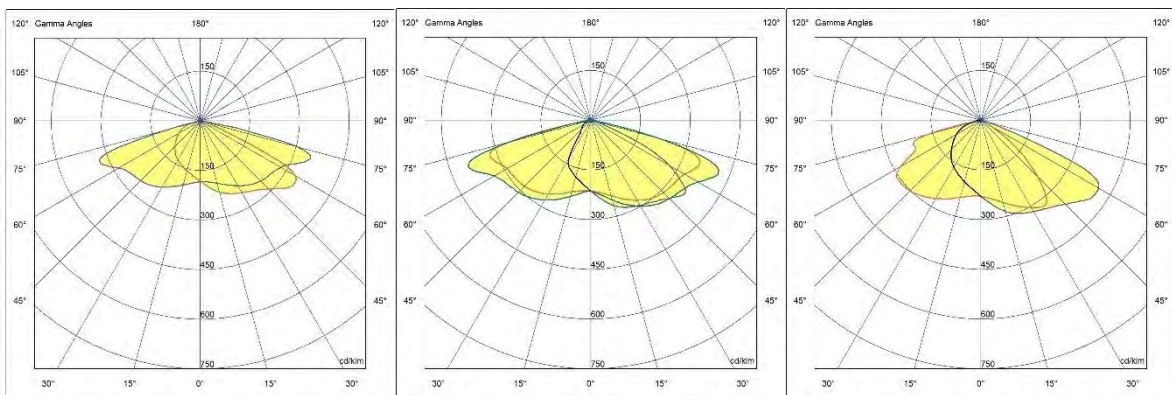
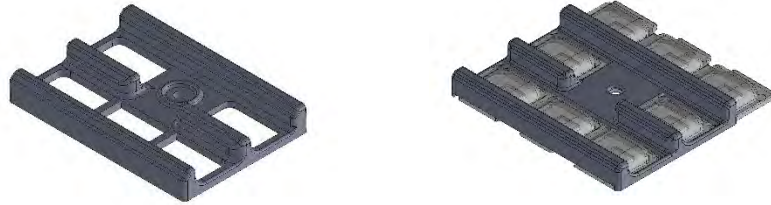
L13



Optics Shields

Available for Back light, Left and Right spill

Installation: on the optics



Original

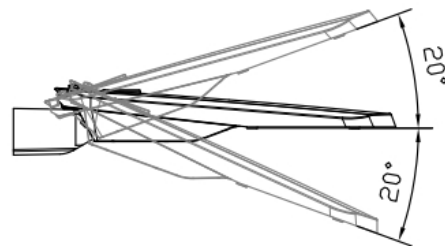
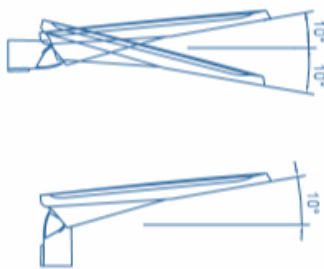
Back

Right

TILT SETTINGS

RAZO-S/M  
-10° - +10°

RAZO-ST/MT  
-20° - +20°

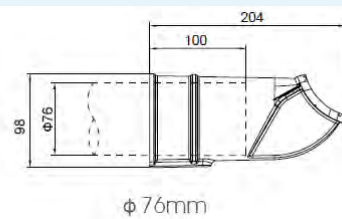
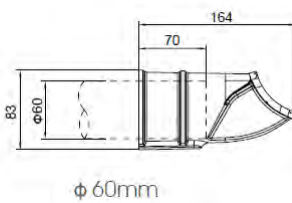
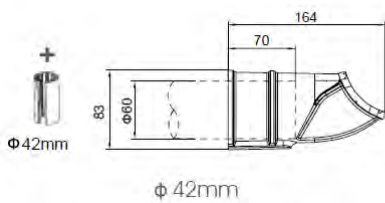


SPIGOT SIZES and ADAPTERS

Ø27-42mm Adapter

Ø42-Ø60mm Standard

Ø60-Ø72mm Adapter





## GENERAL SPECIFICATIONS FOR ALL RAZO VERSIONS

FREQUENCY (Hz)	50/60
POWER FACTOR (COS)	>90
VOLTAGE	AC 100-270 V
DRIVER CONTROL INTERFACE	DALI2
COLOR	DARK GREY (RAL 7026), LIGHT GRAY (RAL 9006)
BODY PARTS MATERIAL	Alu Alloy: LM6 (Die Cast)
ISOLATION CLASS	CLASS I / CLASS II
SURGE PROTECTION	Max Surge Current: 20kA 8/20us; Max Open Circuit Voltage 10 kV
INGRESS PROTECTION	IP66
WIND LOAD FACTOR	S 0.048 / M 0.058
IMPACT PROTECTION	IK09
OPERATING TEMPERATURE	-20°C / +50°C

## CERTIFICATIONS/TEST REPORTS

AS/NZS	IEC (CB) LVD	CE LVD	CE EMC
AS/NZS 1158.6:2015 AS/NZS 60958.1:2013 AS/NZS 60958.2.3:2015  AT Approved M30 listed (PENDING)	IEC 60958-1:2014 IEC EN60958-2-3:2002 IEC 60958-2-3:2002/AMD1:2011 IEC 62471:2006 IEC 62493:2015 IEC LM-80-08	EN 60958-1:2015 EN 60958-2-3:2003/A1:2011 EN 62471:2008 EN 62493:2015	EN 55015:2013/A1:2015 EN 61547:2009 EN 61000-3-2:2014 EN 61000-3-3:2013
Lighting Tests	Salt Spray Test	Vibration Test	EU RoHS
IESNA LM-79-2008	>1000 hrs ISO 9227	IEC60068-2-6:2007	EN 62321:2009



ORDER CODE – LUMINAIRE CONFIGURATION

ORDER CODE POSITION	CODE TYPE	OPTIONS	WHAT IS THIS?
1	Product Family	CRUX GYRO RAZO-S RAZO-M	Name of Product Family
2	Quality Model	P	P= PLUS = D4I Programmable Driver + High Power LEDs
3	LED Qty	Look up in Data Sheet Lumen Table	Choose your LED Qty for desired wattage and lumen area
4	LED Current Setting	Look up in Data Sheet Lumen Table	Choose your LED Current Setting and corresponding System Power for exact wattage and lumen required. The driver will then be pre-programmed to this specific setting during production or installation
5	CRI + CCT	730 740 827	Colour Rendering Index (Ra) = 70 Choose Colour Temperature: 30= 3000K 40=4000K 27=2700K
6	Body Colour	DG LG C	DG=Dark Grey (RAL XXX) LG= Light Grey (RAL XXX) C = Custom Colour (Specify in Order Text)
7	Lens Type	L1, L2, L3, L4 L5, L7, L9	Choose Lens Type for desired lighting distribution according to your Lighting Design Requirements
8	External Control Connector	N ZU ZD ZUD	N =NEMA ZU =ZHAGA – facing UP ZD = ZHAGA – facing DOWN ZUD = ZHAGA – 2 pcs. facing UP and DOWN



1	2	3	4	5	6	7	8
RAZO-M	P	42	350	740	LG	L9	N



RAZO-M-P-42-350-740-LG-L9--N



**RAZO Street Light**

Top/Side Mounted Street Light with Programmable D4I Driver for 20 LEDs in 4000K Colour Temperature set at 350 mA. Equipped with L9 optical lenses. Light Grey Die-Cast Alu Body. Fitted with NEMA 7-PIN for external control device.