

Smart Solitaire3

The **Solitaire** family of Street & Road fixtures by Juganu revolutionizes urban spaces by turning them into smart, connected environments.

These fixtures combine embedded sensors, cameras, and public Wi-Fi with **advanced edge processing**, enabling on-site intelligence and minimizing data transmission to the cloud.

Combined with Juganu's proprietary wireless broadband infrastructure between fixtures, they enable **seamless connectivity across large spaces**.

With a high system efficiency Solitaire3 fixtures delivers **significant energy savings**—up to 90% compared to HPS lamps and 30% compared to other LEDs.



Solitaire
No NEMA



Solitaire
NEMA (ND)



Features

Lighting (configurable at purchase)

- CCT Available in 3000K - 4000K
- Several types of optics for various road conditions

Multiple Data Sensors

- Dual high-resolution cameras
- Audio sensor

Connectivity

- JNET™ 2: Juganu multi-level wireless MESH topology
- JNET™ 1: Juganu wireless lighting management
- NEMA Socket ANSI C136 (Optional)

Access

- Wi-Fi 6 for Public Access (2.4GHz)

Edge Processing

- Local data processing
- Distributed edge computing
- High compute power: Up to 47 TOPS
- Multi-sensor data processing
- Low Latency and High-Efficiency AI Processing

Solitaire3

City & Infrastructure

GENERAL INFORMATION

Dimensions (mm)	Diameter – 642 mm/25.3 in
	Height - Solitaire with Nema – 779 mm/30.7 in Solitaire w/o Nema – 785 mm/30.9 in
Weight	17.5 kg/38.5 lb
Materials	Cast Aluminum body with powder paint, Plastic (PMMA,PC)

OPERATING AND ELECTRICAL

Power Consumption	Up to 50W - Road Lighting Up to 60W – Smart space capabilities
Surge Protection	10 kV
Power Factor	> 0.92, max current THD 15% at 220V
System Efficacy	Up to 100 lm/w for road lighting
Operating Voltage	100 – 240VAC
Maximum Voltage	277 VAC
Operating Frequency	47Hz – 63 Hz
Dimming	Wireless control
Operating Temperature	-40°C +40°C (-40°F to +104°F)
Cooling	Passive cooling
Water Resistance (IP Rating)	IP65

LIGHTING CHARACTERISTICS

Lumen Maintenance	TM21 based on ISTMT and LM80 L70 - 120,000 hours L90 – 60,000 hours
Correlated Color Temperature (CCT)	3000K to 4000K (road lighting) AI: Dynamic Color Shifting (Atmosphere lighting)
Color Rendering Index (CRI)	>70

Solitaire3

City & Infrastructure

EMBEDDED CAMERAS

Number of Optical sensors	2
Resolution/fps	Sensor: Sony, Max Resolution: 12MP 4056(H) x 3040(V)
Field of View (FOV)	90° H, 110° D Additional lenses are optional and can be configured at the time of purchase

INTEGRATED SENSORS

GPS location accuracy	2 meters
Audio (Microphone)	Digital microphone for noise level (dB)

WI-FI ACCESS SERVICE

Wireless Technology	802.11ax , WiFi 6 2.4GHz
---------------------	--------------------------

WIRELESS LIGHTING MANAGEMENT

Wireless Lighting control	Juganu proprietary mesh technology SubG frequency 868/915/433 MHz
NEMA Socket	ANSI 136C

JNET 2 MULTI-LEVEL WIRELESS BACKHAUL

Wireless technology, dual radio	802.11ax WIFI6, WIFI6E ready, MIMO 4x4, BW: 20 MHz, 40 MHz , 80 MHz, 160MHz (optional)
Antenna Types	Omni 4x4
Max Aggregated EIRP	<36dBm

EDGE PROCESSING

GPU	384 NVIDIA CUDA® cores and 48 Tensor cores
CPU	6-core NVIDIA Carmel Arm
Memory	16GByte Flash
Main AI Processor Performance	21 TOPS
Accelerator AI Processor Performance (Hailo 8)	26 TOPS

Solitaire3

City & Infrastructure

Product Data

Product Segment:	Outdoor network Smart HUB
Product Type:	Street & Road lights with full embedded smart space capabilities
Product Family:	Solitaire

Product Certifications

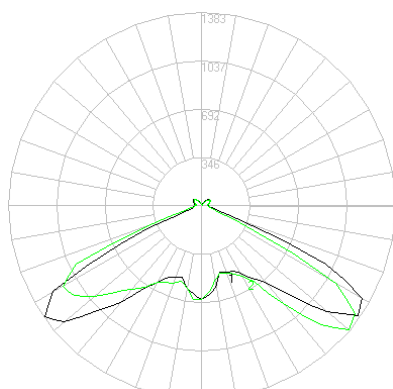
USA/Canada :	cTUVus ,FCC
General:	ISO 9001:2015, ISO 14001:2015

STANDARDS (additional local standards applicable)
The product is designed to meet following standards:

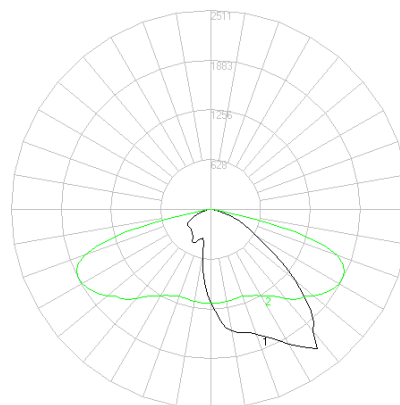
Group	Standard abbreviation	Description
EMC	FCC Part 15 Subpart B CISPR 32	Emission
	ETSI EN 301 489-1,3 ETSI EN 301 489-17,19	Immunity
Radio	ETSI EN 301 893 EN 300 220-1,2 FCC Part 15 Subpart C	Radio Standards
	EN 13032-1 IESNA LM-79 – 2008	Photometric
Photometrics	IEC 62471:2006 IEC62778 and IEEE1789	Photo-biologic, exempt Blue light
	IEC 60529, IEC60598-1	Protection rate
Mechanics and Environment	ETSI EN 300 019-1-4 Class 4.1 IEC60598-1	Environmental
	IEC 60598-2-3	Wind Load
Safety	IEC 60598-2-3 IEC60598-1 IEC 62368-1	Contains: Dielectric strength Insulation resistance Leakage current Protection against electric shock Torque resistance of screws and fittings Weight/wind
	UL 1598	UL Standard for Safety of Luminaires for the North America market
	IEC 62031	Safety of LED board
	EN61347-1, EN61347-2-13, EN62384	LED driver safety
Luminaire Performance Test	EN 62722-1:2016 EN 62722-2-1:2016, EN 62717	Lumens and CRI performance test over 1000 hours
	ISTMT TM-21, LM-80	Temp. of LED, Driver

Photometric Curves

D01 Type VS, Symmetric



D02 Type II, Short



Mounting

- Integral die cast mounting pole stop feature
- 60 mm (2.36") – 76 mm (3.00") pole

Performance (4000K)

Power [W]	Typ. efficacy [LPW]	Total lumens [LM]
50W road lighting	100	5000

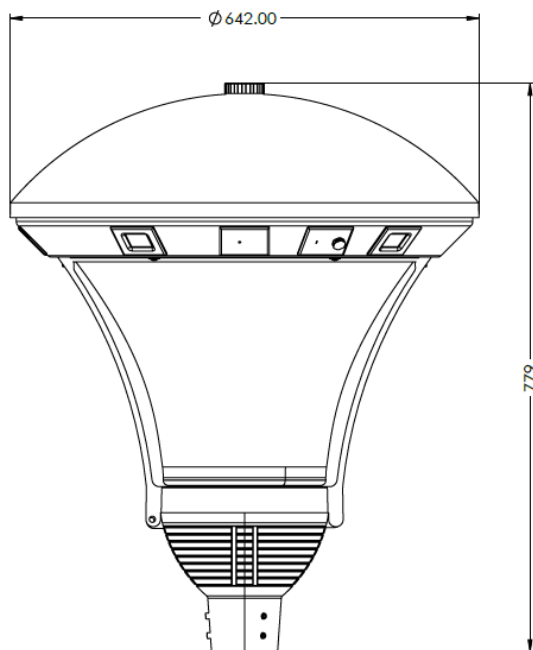
Package Contents

<input type="checkbox"/> Solitaire3 fixture	<div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;"> <p>Solitaire No NEMA</p>  </div> <div style="text-align: center;"> <p>Solitaire NEMA (ND)</p>  </div> </div>
<input type="checkbox"/> Six (6) Hexagon socket set screws	
<input type="checkbox"/> 3-pin AC junction box connector	
<input type="checkbox"/> RJ45 waterproof coupler	

Mechanical Dimension

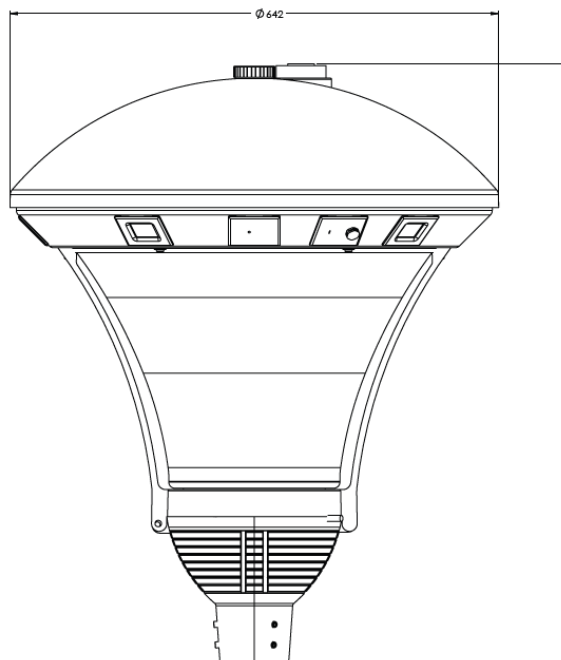
Solitaire without Nema

Height - 779mm/30.7 in
Diameter – 642mm/25.3 in



Solitaire with Nema (ND)

Height - 785mm/30.9 in
Diameter – 642mm/25.3 in



Packaging and Weight

Lighting Fixtures Dimensions		Packaging Dimensions	Net Weight	Gross weight
Solitaire without Nema	Solitaire with Nema (ND)			
Height - 779mm/30.7 in Diameter – 642mm/25.3 in	Height - 785mm/30.9 in Diameter – 642mm/25.3 in	820 x 695 x 695 mm 32.3 x 27.4 x 27.4 in	17.5 kg/38.5 lb	20 kg/44 lb

Ordering Information

Product	Family	CCT	NEMA	Distribution curve	Smart
JLED-SL	Solitaire	XX	xx	Dxx	Sx

		Default
CCT (other values possible)	30 – 3000K	
	40 – 4000K	Default
NEMA Socket	Blank, no NEMA	Default
	ND, with NEMA and Dali	
	NA, with NEMA and PWM	
Distribution curves (see distribution curve)	D01 – Type VS, Very short	Default
	D02 - Type III, Medium	
Smart	Blank - LED fixture with sensors and backhaul	Default
	W0 - LED fixture without sensors and backhaul	

Ordering Example

Order Code: *JLED-SL-SOLITAIRE3-40-NA-D01*

Description

Solitaire3 Street Light, 4,000K, Nema PWM, D01 Optics