Tvilight Nema 7-pin receptacle provides a mechanical and electrical interconnection between an ANSI C136.41 compliant outdoor lamp controller and street luminaire. Ideal for public lighting, the Nema 7-pin socket is available with four dimming contacts to support either 0-10 VDC analog dimming or DALI (Digital Addressable Lighting Interface) dimming as well as possible connection of motion sensor. Nema socket is constructed of durable long-life material. It comes with silicon gasket to maintain water tightness and IP rating of the smart street light fixture.

Features

- Fixed (non-rotatable) mounting for robust mechanical connection

- Pre-terminated wire leads for ease of integration into new or existing light fixtures

- Supports ANSI standard based 3-pin, 5-pin and 7-pin shorting cap, dimmable photocell, and smart lamp controller

- Reliable twist-lock contacts for a reliable power interconnect

- High temperature (105˚C) rated wire insulation for protection against high internal luminaire temperature

- Available with four dimming contacts to support dimming as well as sensor connectivity

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Electrical

cUL Recognized Component	
Power contacts	Voltage rating: max. 480 VAC / DC Current rating: max. 15 A
Dimming contacts	Voltage rating: max. 30 VAC / DC Current rating: typical 250 mA (rated 1.5A)

Mechanical

Confirms to ANSI C136.41 – 2013 Standard	
Number of cables	3 wires for AC Mains Contact (14 AWG) 4 wires for Dimming / Signals (18 AWG)
Wire length	30 cm (approx. 12")
Contacts of Power Cables terminated as per UL1015	
Contacts of Dimming Wires terminated as per UL1015	

Materials

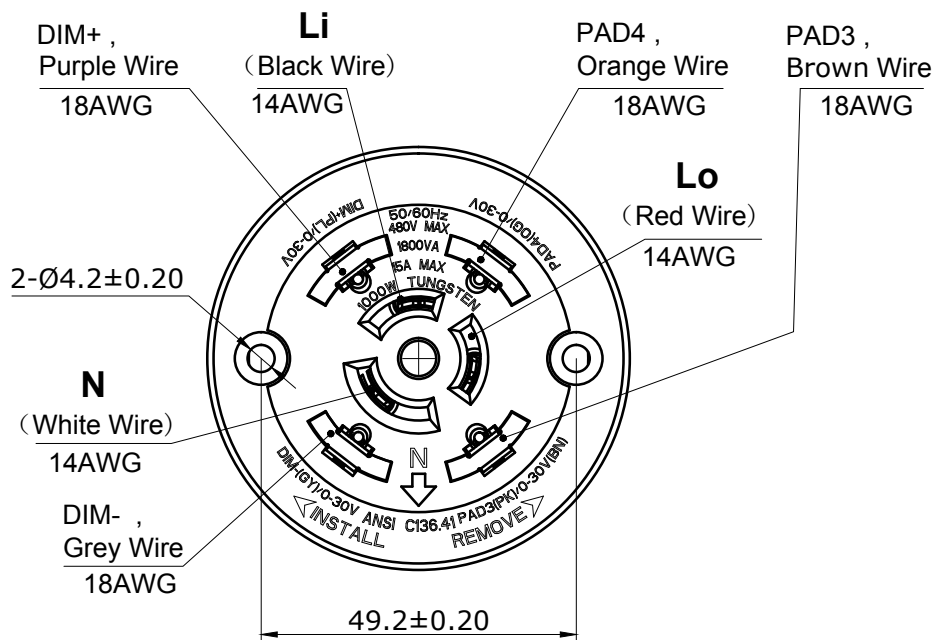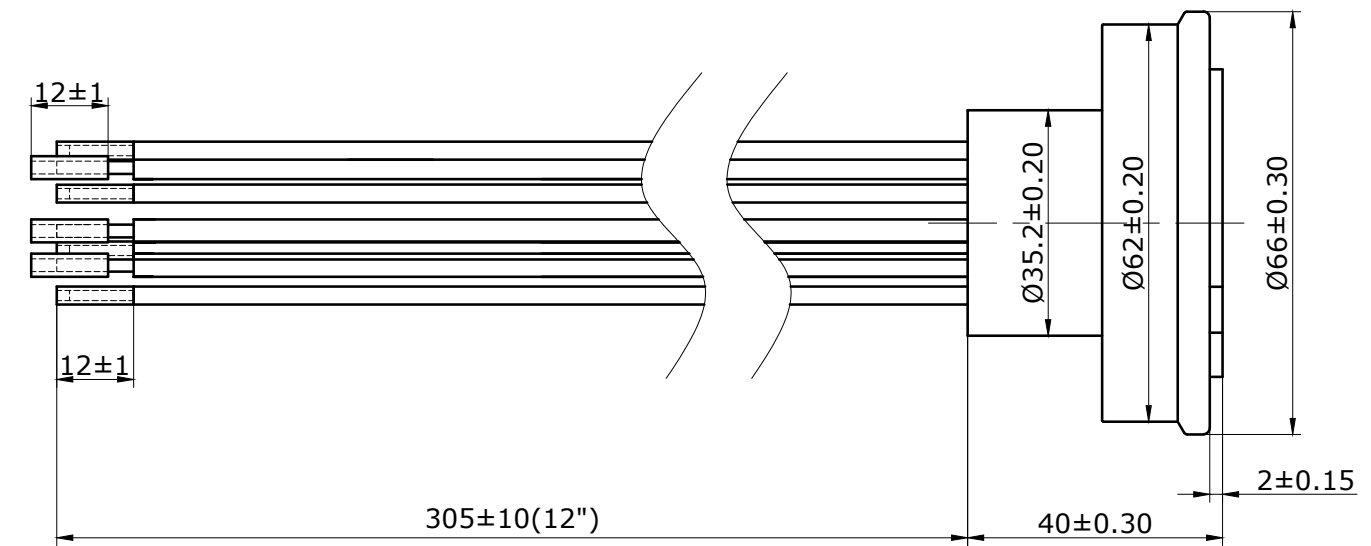|	
Power contacts	Phosphor copper
Dimming contacts	Phosphor copper with nickel plating. Gold plating on the contacting parts
Housing	Bakelite

Operating Temperature

Ambient temperature	-40˚c to +70˚c

Certificates and Standards

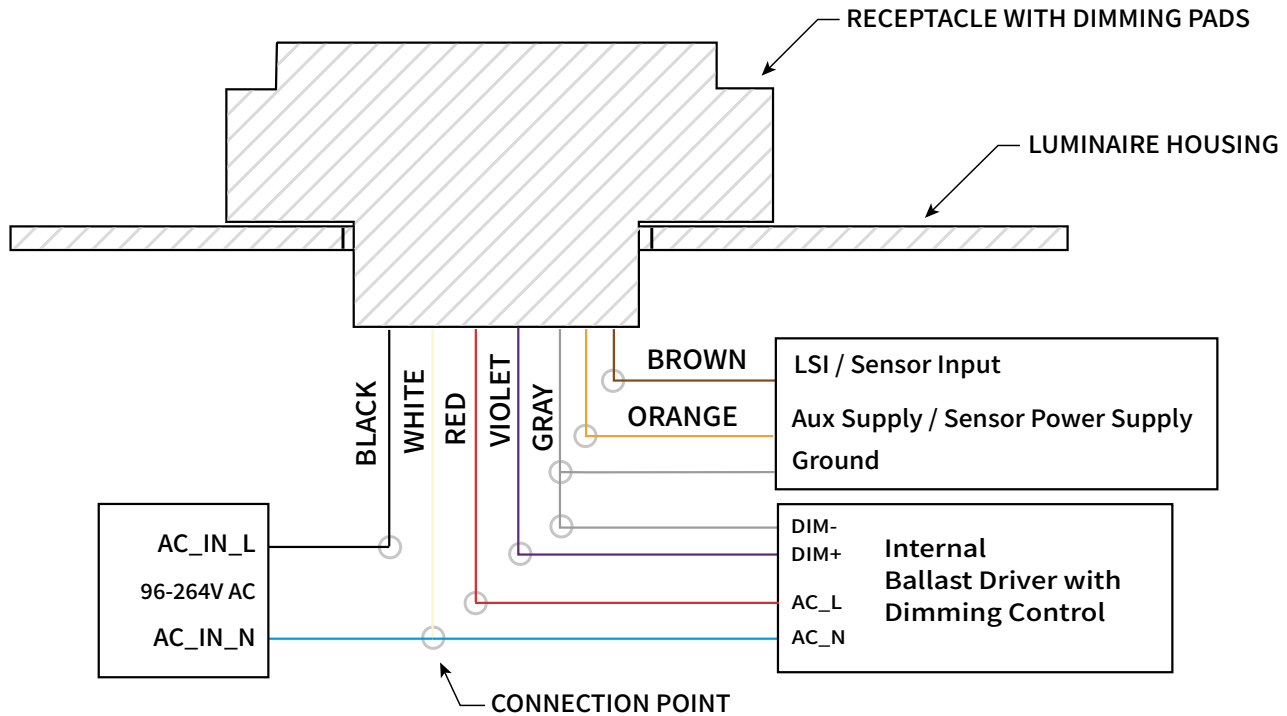|	
Ingress protection class	IP66 when combined with suitable Shorting Cap, Photocell or Smart Lamp Controller
Approved marks	UL listed CE and CB certified RoHS and REACH Compliant

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Dimensions

12±1

12±1

Ø35.2±0.20

Ø62±0.20

Ø66±0.30

2±0.15

305±10(12")

40±0.30

DIM+ ,
Purple Wire
18AWG

Li
（Black Wire）
14AWG

PAD4 ,
Orange Wire
18AWG

PAD3 ,
Brown Wire
18AWG

Lo
（Red Wire）
14AWG

2-Ø4.2±0.20

N
（White Wire）
14AWG

DIM- ,
Grey Wire
18AWG

50/60Hz
480V MAX
1800VA
15A MAX
1000W TUNGSTEN

DIM+(PL)/0-30V

PAD4(OG)/0-30V

DIM-(GY)/0-30V

PAD3(PK)/0-30V(BN)

ANSI C136.41

INSTALL

REMOVE

N

49.2±0.20

Packaging

Item	Dimension	Quantity
Molded Pulp Tray	/	20 units
Master Carton	41 x 33 x 35.5 cm	100 units

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Wiring Diagram

RECEPTACLE WITH DIMMING PADS

LUMINAIRE HOUSING

BLACK   WHITE   RED   VIOLET   GRAY

BROWN — LSI / Sensor Input

ORANGE — Aux Supply / Sensor Power Supply

Ground

DIM-	
DIM+	**Internal**
	Ballast Driver with
AC_L	**Dimming Control**
AC_N	

AC_IN_L

96-264V AC

AC_IN_N

CONNECTION POINT

Compatible Parts

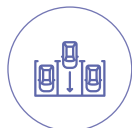|	
OpenSky NEMA IoT	NEMA 7-pin Outdoor Lamp Controller with Cellular IoT connectivity and on-board GPS
SkySwitch NEMA	NEMA 3-pin Photocell IP67 with filtered photodiode

Applications

Street and Roadway Lighting

Commercial Lighting

Outdoor Parking Lots

Sports Lighting

Ports/Harbors /Shipyards

Campus Street Lights

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