GENLYTE SOLUTIONS

a signify business

Outdoor

Zhaga-D4i

Certified Luminaires

Zhaga-D4i Certified Outdoor Luminaires

Smarter, Interoperable, & Future-Ready

Leveraging a universal plug-and-play socket for controls

Just as the tech industry has adopted a standardized USB-C connector for data transfers/charging/accessory attachment, the lighting industry is undergoing a revolution with Zhaga-D4i luminaire certification.

Ideal Applications

- ✔ Municipal street lighting
- ✔ Campus outdoor lighting
- ✔ Industrial outdoor lighting
- ✔ Parking lot & garage lighting
- ✔ Public space lighting
- ✔ Smart city project lighting
- ✔ Infrastructure lighting
- ✔ Transportation lighting

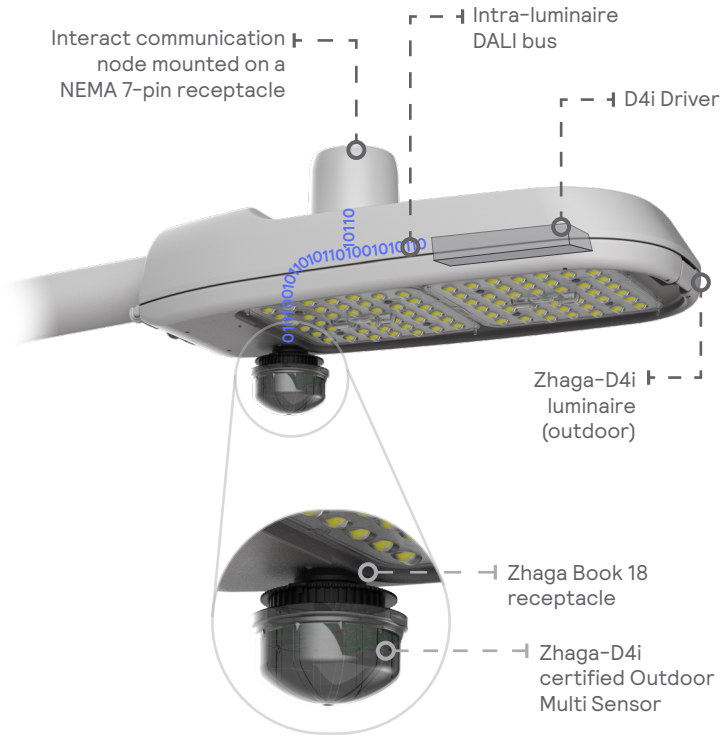
Zhaga-D4i Certified Luminaires

What is Zhaga-D4i Certification?

Zhaga-D4i is a joint certification program from the DALI Alliance[1] and the Zhaga Consortium[2]. Certified Zhaga-D4i products can carry the dual logos of Zhaga and D4i, which together indicate plug-and-play interoperability of sensors, communication nodes and luminaires.

Why choose Zhaga-D4i Certification?

Investing in the interoperable Zhaga-D4i ecosystem enables LED luminaires built on standardized connectivity delivering scalable, sustainable, and future-ready outdoor lighting for the next generation of urban infrastructure.



1. The DALI Alliance is the global industry organization for DALI (Digital Addressable Lighting Interface), the internationally standardized protocol for digital communication between lighting control devices.
2. Zhaga is an open, global lighting-industry consortium with a mission to standardize the interfaces of components of LED luminaires. Zhaga Interface Specifications, known as Books, define the necessary conditions for interoperability.

Key Benefits

Plug-and-Play Smart City Integration

- Seamless compatibility with a wide range of certified sensors and nodes.
- Enables backwards compatibility and easy upgrades to smart lighting without rewiring/redesigning.

Simplified Maintenance & Replacement

- Standardized interface allows quick replacement of control devices.
- Reduces downtime and maintenance costs.

Global Interoperability

- Certified under recognized international standards.
- Ensures reliable performance across diverse urban environments.

Future-Ready Design

- Supports evolving smart city technologies.
- Ensures long-term compatibility with new devices and systems.

Energy & Data Efficiency

- Built-in D4i drivers provide real-time energy usage and diagnostics.
- Enables advanced asset management and predictive maintenance.

Enhanced Sustainability

- Supports adaptive lighting strategies for reduced energy consumption.
- Integrates with environmental sensors for smarter urban planning.

ZD4i vs. Non-ZD4i Outdoor Luminaires

Comparing ZD4i certified outdoor luminaires with non-ZD4i options:
Key differences in functionality, compatibility, and long-term value.

Feature	ZD4i Certified Luminaire	Non-ZD4i Luminaire
Smart Node Compatibility	Plug-and-play with certified sensors and controllers	Often requires custom integration or proprietary solutions
Interoperability	Guaranteed across vendors (Zhaga + D4i standards)	Limited; may be locked to specific brands or protocols
Future-Proofing	Ready for smart city upgrades and evolving technology	May require full fixture replacement for upgrades
Maintenance Efficiency	Quick swap of control devices; standardized interface	Reconfiguration or manual rewiring or often needed
Energy Monitoring & Diagnostics	Built-in D4i driver enables real-time data reporting	Typically lacks integrated energy/data reporting
Asset Management	Supports advanced asset tracking and predictive maintenance	Basic or manual asset tracking only
Sustainability	Enables adaptive lighting and energy savings	Fixed output; less responsive to environmental needs
Installation Cost	Slightly higher upfront cost, but lower lifecycle cost	Lower initial cost, higher long-term maintenance and upgrade costs
Compliance & Certification	Globally recognized standards (Zhaga, DALI)	May not meet international interoperability standards

ZD4i-certified luminaires are ideal for municipalities, campuses, and developers seeking scalable, intelligent, and sustainable lighting. Non-ZD4i luminaires may suit basic applications but can become costly and complex when smart features or upgrades are needed.

GENLYTE SOLUTIONS
a signify business

Signify North America Corp.
400 Crossing Blvd, Suite 600
Bridgewater, NJ 08807
Telephone: 800-555-0050

Signify Canada Ltd.
281 Hillmount Road,
Markham, ON, Canada L6C 2S3
Telephone: 800-668-9008