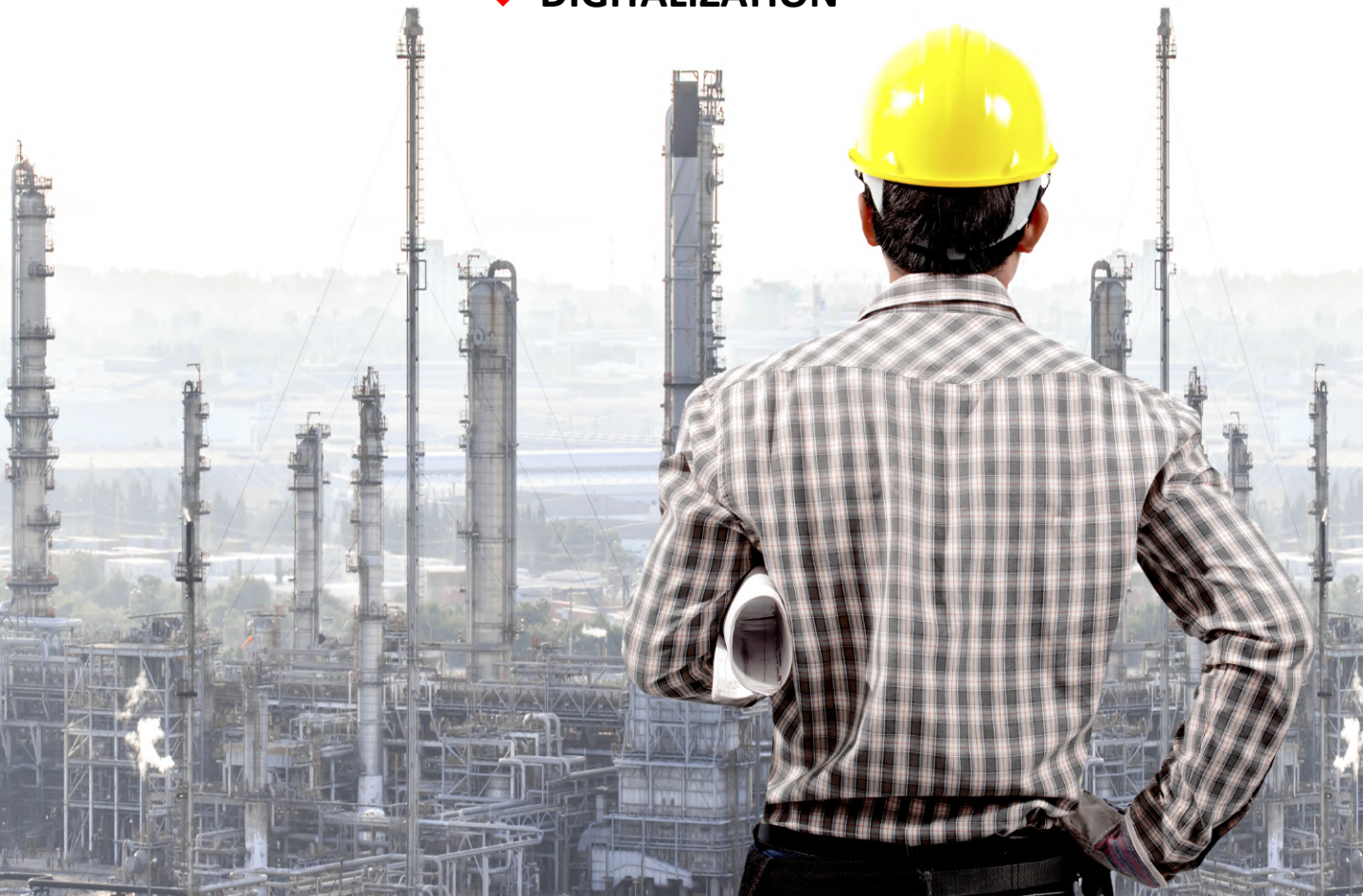


# Smart Factory

## Industrial Lighting & Automation

- ❖ **RENOVATION**
- ❖ **UPGRADE**
- ❖ **DIGITALIZATION**



## SWITCHING AUTOMATION



Handsfree automated switching of lights by using standalone PIR / HF Sensors. One Sensor can connect up to 600W LED Lights for occupancy based ON-OFF. 6/8/12/20/24/32/40 meter detection range models available (360°). Detection control mask provision.

## HVAC / FAN AUTOMATION



Automated ON-OFF Switching of Light + A/C or Fan by using 2 Channel **PLUS Sensor**. One Channel for Lights up to 600W and the other channel for HVAC or Fan up to 2300W load. Option of push button and or remote control for manual override. 8/24/32 meter detection

## OUTDOOR LIGHT CONTROL



Fixture inbuilt or panel inbuilt Twilight switches for Dusk to Dawn automated switching of Outdoor Lights. Wall mounted Twilight switches for area lighting (with or without timer option).

## HIGHBAY SENSOR AUTOMATION



1-10V Analogue dimming standalone sensors for High bay / High mounted Light control. Occupancy based Switching, Daylight Harvesting, Auto Dimming & Orientation Lighting. One Sensor to control up to 400W High bay Load. Mounting height up to 15 Mtr. Up to 24 Mtr detection

## DAYLIGHT HARVESTING-DALI



Daylight harvesting & dimming for office lighting by DALI broadcast sensors. One sensor can connect up to 25 DALI fixtures. Occupancy based switching, daylight based dimming, orientation light etc. are some of the features. Push button and remote options for manual override. 6/8 meter options.

## MEETING ROOM AUTOMATION



**All in one DALI-DUO** sensor for meeting room Automation. This standalone sensor can connect up to 50 DALI devices. Any non DALI device like A/C, projector etc. can also be connected by using suitable DALI relays as accessory. Scene control by remote / push button.

## DEFENSOR SAFETY & CONTROL



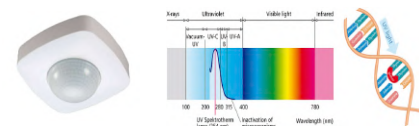
Standalone sensor for area lighting / garden lighting control. Dusk to Dawn light switching, Timer based switching, Motion sensor and safety from vandalism, all in one sensor. First of its kind. Award winning innovation from iTvis hybrid partner ESYLUX, Germany.

## LIGHTING SCENE CONTROL



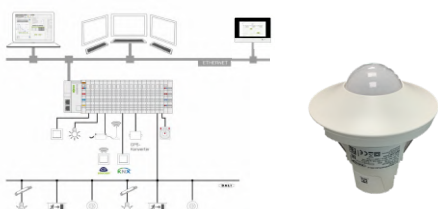
DALI Lighting Controllers for Dimming, CCT Tuning and scene controls. Best for creating different intensity and CCT of Lights for Office area, VC Rooms, Conference Rooms, Inspection area, Painting area etc. Connect up to 50 DALI Devices / DALI Lights per Controller

## UVC CONTROL FOR DISINFECTION



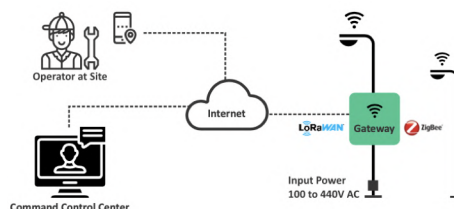
UVGI (Ultraviolet Germicidal Irradiation) and Disinfection management by using 2 channel UVC sensor. One channel for general lighting and the other channel for UVC light switching. This sensor prevents UVC light exposure to human being. Up to 16 meter detection range (360°)

## LMS & BMS



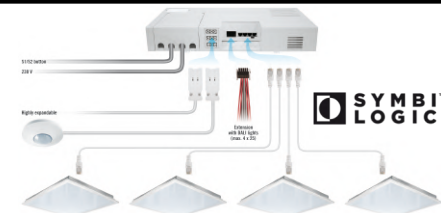
DALI-2 Lighting management Systems & Building Management systems for Indoor Lighting control. For Open Offices, Conference Rooms & Entire Building

## CCMS – OUTDOOR



Wireless CCMS (Centralized Control & Monitoring Systems) for outdoor and area lights . IOT based Controllers, Gateway, & Software for wireless CCMS. Remote Control, Monitoring & Scheduling

## HUMAN CENTRIC LIGHTING



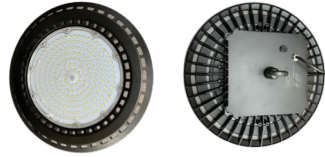
POE + DALI Controller & Tunable Luminaires with Patented German technology for Human centric Lighting. Biological effective lighting & Emotional effective lighting together. For Board rooms / Conference Room / R&D room

## MODULAR HIGHBAY - TILT



Modular High bay Specially designed for Industrial applications. Tiltable wings to get maximum coverage on machine areas. Available both Dimmable & Non Dimmable options. Compatible with ON-OFF or Daylight harvesting Sensors for energy saving.

## ROUND HIGHBAY WITH OPTICS



UFO Type Round High bay with 60/90/120 degree optics options. Available in various wattages. Up to 145 lpw options available. Available both Dimmable & Non Dimmable options. Compatible with ON-OFF or Daylight harvesting Sensors for energy saving.

## LINEAR HIGHBAY



Linear modular High bay Specially designed for wide coverage. 1/2/3/4 Modules options with each modules at 50W. Available both Dimmable & Non Dimmable options. Compatible with ON-OFF or Daylight harvesting Sensors for energy saving.

## MULTI MODULAR HIGHBAY



Multi modular High bay expandable up to 1000W. 60/90 Degree optics options. Available both Dimmable & Non Dimmable options. Compatible with ON-OFF or Daylight harvesting Sensors for energy saving.

## INDUSTRIAL LINEAR



Industrial grade Linear Fixture suitable for 24 Hrs Industrial application. Isolated encapsulated LED Driver. Low UGR Diffuser. Available in 28/30/36W. Non Dimmable and Dimmable options. Compatible with both ON-OFF and Dimmable Sensors.

## CLEAN ROOM FIXTURES



Cleanroom Fixtures of all types. Top Opening or Bottom opening. Available in 2x2, 1x1, 2x1 sizes. 20/30/36/42/60W Option. Dimming / Non Dimming Options available. Available with or without inbuilt Sensors. Compatible with ON-OFF or Auto Dimming Sensors .

## WELL GLASS



Industrial Well Glass 30/40W with Transparent / Milky Diffuser. Available with Inbuilt Driver.

## FLOOD / HIGHMAST LIGHTS



Flood Light Fixtures for Outdoor Applications. Specially designed for area lighting and also High mast Lighting. Options of Narrow / Wide beam optics. Available in various wattages. Dimmable / Non Dimmable options. Compatible for Wireless Lighting control with ILC

## DIFFUSER HIGHBAY



Fabricated Linear High bay with Diffuser. Available in 150/300W. Dimmable / Non Dimmable options available. Inbuilt Sensor options. Compatible with ON-OFF Sensors or Dimmable Sensors when used with relevant LED drivers.

## STREET LIGHTS



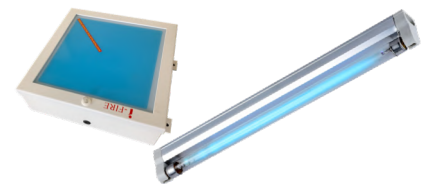
Street Lights for various outdoor applications. COB / SMD LED Options. Wide range of beam angle. Available in various wattages. Dimmable / Non Dimmable Options. Compatible with Dusk to Dawn Sensors / Wireless communications.

## OFFICE LIGHTING



Wide range of Office lighting fixtures with Low UGR. 2x1, 4x1, Linear, Down lights, Surface mounting / Recess mounting Fixtures for all application. With or without Sensors. Dimmable / Non Dimmable Options

## FIRE ESCAPE & UV LIGHTING



Maintained or non maintained Fire escape lights specially designed for industrial emergency applications.

UVC Disinfection Lamps available with Fixtures and also with compatible Sensors



**RENOVATION**

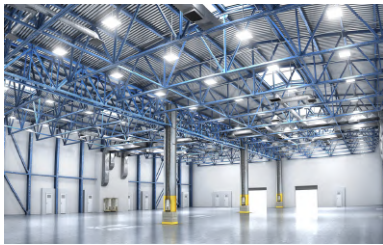


**UPGRADE**



**DIGITALISATION**

## SHOP FLOOR



**Renovation:** Switch to high efficacy LED lights (preferably modular) with suitable optic lenses for lower power consumption & higher reliability.  
**Upgrade:** Use Daylight Harvesting Sensors coupled with dimmable high bays  
**Digitalization:** Wireless / Wired Lighting management Systems (LMS)



## LOW HEIGHT ASSEMBLY AREAS



**Renovation:** Replace Domestic grade LED battens to Industrial grade linear LED Lights (with isolated driver & High efficacy LED)  
**Upgrade:** Use occupancy sensors for lights (Inbuilt / Standalone) , Use PLUS Sensor for Light + Industrial Fan auto ON-OFF



## WAREHOUSE / STORE AREA



**Renovation:** Switch to High efficacy LED Lights (1) Linear Modular High bays for Heighted bays. Industrial Grade Linear LED Light for low height isles.  
**Upgrade:** Occupancy Sensors at the entry & exit of Isles, High bay Sensors up to 15 Mtr Heighted lights.



## INSPECTION AREA



**Renovation:** Improve Lux level by customized luminaires. Switch to 90 CRI.  
**Upgrade:** (1) Sensors for occupancy based ON-OFF (2) Scene Controls with various light intensity (2) Tunable lights with CCT Tunable Controllers for colored object inspection.



## CANTEEN AREA



**Renovation:** Switch to High efficacy LED Luminaires  
**Upgrade:** (1) Sensors for Occupancy based ON-OFF (2) Plus Sensor for automated ON-OFF of Lights + Fan (2) UVC Lights & Sensors for disinfection



## OPEN OFFICES



**Renovation:** Switch to high efficacy LED lights with low UGR (Unified Glare Ratio), for higher performance.

**Upgrade:** (1) ON-OFF Sensor for Occupancy based switching (2) DALI Dimmable Sensors for Daylight Harvesting (In case of glass façade / window)

**Digitalization:** DALI-2 Lighting Management System



## EXECUTIVE CABINS



**Renovation:** Switch to High efficacy LED Luminaires with low UGR

**Upgrade:** (1) PLUS Sensor for Lights + A/C (2) DALI Dimming Sensors for daylight harvesting & Dimming (3) Human Centric Lighting.



## CONFERENCE ROOMS



**Renovation:** Switch to High efficacy LED Lights

**Upgrade:** (1) DALI-DUO Sensor for Lighting Scenarios (2) DALI touch panels for dimming (3) Human Centric Lighting



## PASSAGES, STAIRCASES & LOBBIES



**Renovation:** Switch to High efficacy LED Lights

**Upgrade:** (1) ON-OFF Sensor for Occupancy Switching (2) DALI Dimmable Sensor for Orientation Lighting (3) Dimming Driver Cum Sensor



## WASH ROOMS



**Renovation:** Switch to High efficacy LED Luminaires

**Upgrade:** (1) Sensors for Occupancy based ON-OFF (2) Sensor for Light + Exhaust fan (1 Channel or 2 Channel)



## OUTDOOR LIGHTING



**Renovation:** Switch to High efficacy LED Luminaires

**Upgrade:** (1) Dust to Dawn Sensors for Day-Night Switching

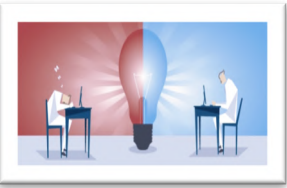
**Digitalization:** (2) CCMS – Feeder level (2) Wireless Lighting Controller – Individual Dimming & Scheduling





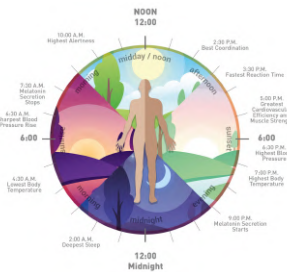
## COST SAVING

- ✓ Conventional Lights to LED – 55% energy saving
- ✓ Change over to High efficacy LED – 30% energy saving
- ✓ Occupancy based ON-OFF (Sensors) – 35% energy saving
- ✓ Daylight Harvesting (Auto Dimming) – 20-25% energy saving
- ✓ Savings from Auto Switching of A/Cs & Fan (fast payback)



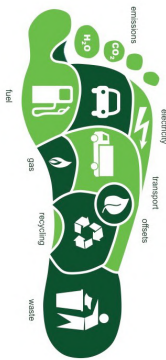
## BETTER PRODUCTIVITY

- ✓ Enhanced Productivity by Illumination Management
- ✓ Meeting Room scenarios for effective presentations



## HEALTH & SAFETY

- ✓ Many Intangible benefits from Human Centric Lighting
- ✓ Better Sleep, Reduced errors, enhanced creativity
- ✓ UVC Germicidal Irradiation help healthy work space
- ✓ Fire escape lighting for emergency evacuation



## SUSTAINABILITY

### Carbon Foot Print Statistics:

- 0.95kg Carbon emission / 1KWhr electricity
- 1 Tree required for 160kg carbon neutral
- High efficacy LEDs, Demand Driven Switching & Daylight Harvesting save huge amount of energy, thus reduce carbon emission drastically !



## INDUSTRY 4.0 BENEFITS

- ✓ Remote Control & Monitoring from LMS & BMS
- ✓ Data analytics & Control
- ✓ Dash board control
- ✓ Fault alerts
- ✓ All electrical devices on single dash board control



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**ONE STOP SOURCE FOR  
INTELLIGENT LIGHTING & AUTOMATION**