



## Technopolis IT Park, Kolkata – Green Building

### **Brief:**

Green building concept is getting popular as it gives certain advantages like energy efficient with less impact on energy and atmosphere, environment friendly with the use of proper material and resources, conservation and reusing of water resources and sustainable site with good indoor environmental quality.



Technopolis is one of the largest green buildings in India. It is 14-story office building creating 425,000Sq.ft. Of workspaces.

### **Needs:**

The objective was to provide the energy efficient lighting and lighting controls design to meet the design criteria of 1.3W/Sq.ft as per US-LEED (US-Leadership in Energy and Environmental Design) standard.



## Lighting Solutions:

The main Lighting Solutions comprised of three different solutions –

### ➤ ***Use of energy efficient luminaires***

The selection criterion for selection of main workstation luminaire was energy efficiency, longer life, low glare and aesthetic look. Based on the above-mentioned criteria,



recessed mounted, direct light luminaire with P5 paralite louvers suitable for 2 nos. of 36W CFL lamps are used. The luminaires were proposed with SIGMA Electronic ballast, which confirms to all European standards. The illumination level considered for lighting design considering the modern office working style at around 350 - 400 Lux average.

### ➤ ***Use of occupancy detection sensors***

To increase the energy saving without investing more on lighting, a simple presence detector sensor is used. The sensor with inbuilt intelligence of detection only human presence was installed to control all the luminaires inside closed cabins.



Sensor works on PIR (Passive Infrared Technology) for detecting human presence. It switches ON the lights immediately when detects human presence inside cabin and switches OFF the lights when no human presence is detected for the pre-programmed time.



➤ ***Use of Day light detection sensors***

Day light harvesting is one of the good old techniques used to reduce the energy consumption. It takes into account daylight present in the area and accordingly dims the light suitably to get the required illumination level. All the luminaries near windows are installed with



digital dimmable ballast, which has ability to dim fluorescent lamps. The sensors are also installed and programmed to give required average illumination. When the sensor detects sufficient daylight on the workstations near windows, it dims the luminaires connected to it and thus saves energy.

**Product Used:**

- Wipro Make, Crescent – WVP24236SGW – Recessed mounted direct lighting luminaire suitable for 2 nos. of 36W CFL lamps with P5 paralite louvers to reduce glare and SIGMA electronic ballast for energy efficiency.
- Wipro Make, Venus – WVP27218SGW / WVP27118SGW – Recessed mounted downlight luminaire suitable for 2 nos. of 18W CFL or 1 nos. of 18 of CFL lamps with frosted diffuser to reduce glare and SIGMA electronic ballast for energy efficiency.
- Wipro Make, Silver Lightspot – COP11010 – Non-regulating high performance, programmable presence detector for lighting control in cabins.
- Wipro Make, Silver Lightspot – CDA13010– Regulating high performance, programmable presence detector suitable for digital dimmable ballast with built in photocell.



## **Summary:**

Using combination of proper luminaires and lighting control devices, solution proposed was able to meet the requirements of Green Building for good quality, energy efficient working environment.

Wipro would like to answer any queries or questions you have on Energy Efficient lighting, stand alone and network based Lighting Control systems related topics. Please feel free to contact us on **helpdesk.lighting@wipro.com**. You can also visit our website **www.wiprolighting.com** for more information.