

Technical Specifications

A. Pole

- Signal poles shall be made of Class B type with Galvanized Iron Square and rectangular section pipes.
- The dimension of the pole should be as per the drawings provided by NOIDA Authority.
- Signal poles shall have the dimensions as stated below:
 - Vertical Pole shaft: 150mm x 150mm x 5 mm (Thickness) and 7 mtr height.
 - Horizontal Arm: 150 x 100 x 3 mm thick and 6570mm length.
 - Fixture Arm for Aspects at Center: 80mm x 80mm x 3mm x 1300mm.
 - Base Plate: 450 x450 x 16mm (Thickness).
- Gussets should be of size 250 X 60 X 10mm thick to be welded on all four sides.
- Foundation Bolts: M30/850mm.
- Hood for LED light fixture: 1197mm x 50mm x 3mm thickness
- The base plate section shall have a cover with a retrofit metal box
- The pole shall have welded plates on both sides of size 260 x 150 x 16mm with appropriate holes and SS 304 bolts for holding a 6570mm length Cantilever arm (Details B)
- The Joint section on the top side of the pole shall be covered with a metal box enclosure having MCGM logo on the front and back side.
- The Joint section on the top side of the pole shall have provision for placement and installation of signal light circuits, LED light modules, control units etc.
- The box at the joint section on the top side of the pole shall be made of MS material with dimension of SQ 510 x 240 with 1.2 mm thick. The front door shall also have hinged frames for easy maintenance accessibility.
- The Pole shall have provision for retrofitting Directional Light Fixtures as per required design (i.e. Unidirectional / Bi-Directional). The pole with all fittings shall be made IP compatible.
- The pole shall be welded with M8/34mm long bolts with 25mm dia holes for cable entry for signal aspect mounting.
- The pole should be tested and certified for Structural stability through authorized and certified Structural agencies in this field
- The pole shall have a provision for locking Traffic signal and Pedestrian signal aspects.
- The cantilever arm shall have proper wire rope arrangement to avoid bending movement at the cantilever end.
- The pole shall have provision for additional support through rope wire looping and locking with 50 x 50 x 12mm thick welding.
- The wire rope of 8mm dia shall be used of two lengths i.e. 6 mtr and 4 mtrs respectively. Each rope shall have its own Turnbuckle with hook and wire rope clip kit.
- All the Square Pipe material used shall be of IS standard conforming to IS:4923 and YST 210 & Base Plate should conform to IS 2062 : 2011.
- The pole shall be painted with approved PU colour Shade RAL 7016 (ANTHRACITE GRAY) and standard process of 3 coats should be followed as per below post sand blasting & cleaning of material is done.
 - First coat shall be of etch primer.
 - Second coat shall be of Zinc phosphate primer.
 - Final coat shall be of Polyurethane Paint.
- Coating thickness shall be minimum 70 microns (+/-10 microns).

B. LED LIGHT MODULE:

- The LED light modules design should be easy to assemble, install and maintain.
- The LED light modules should be viewable from a minimum distance 500 meters.
- The LED light modules should also enhance street aesthetics.
- The LED light modules should synchronise / integrate with existing signal control programmes and emit the Red, Green, Yellow colours in accordance to the wavelength of existing Signal LED aspects
- The LED light modules should be robust, Light weight, rustproof, long life, wind resistant, weatherproof and heat resistant.
- The installation of LED light modules should be user friendly.
- The LED light modules should be anti-glare and shall not hurt the eyes of drivers & pedestrians.
- The power consumption of the LED light modules should not exceed 10 watts per meter per colour per module and voltage should be 12 V DC or 24 V DC as applicable on switch mode power supply.
- The LED light modules should be able to work from 100-305 VAC, 47-63 Hz to sustain voltage fluctuations .
- The LED light modules should work on a common power supply source.
- The LED light modules should be compatible for both Unidirectional and Multi-Directional Signals.
- The LED light modules should work on constant voltage + constant current system, High efficiency up to 94%, Voltage tolerance +/-2%, Line Regulation +/- 0.5% , Load Regulation +/- 1% , Setup/Rise time 100ms/ 230vac, Hold up time 10ms/230VAC, Power Factor >= 0.93, Total Harmonic Distortion < 10%, Suitable for dry, damp, and wet location, Protections: Short circuit / Overload / Over voltage / Over temperature .
- The LED light modules should be IP 65 rated, and all internal connections should be with water proof connectors
- LED Chip used in the LED light modules and the LED bonding material should be of good quality with best PN junction bonding.
- LED light modules Frame material should be 100% Copper Lead for better heat dissipation.
- LED Module should be fitted on Aluminium frame.
- The LED Wavelength tolerance should be within 3 nm for consistency in color throughout the lifespan of the fixture.
- The Enclosure for electrical accessories should be IP65 rated.
- Power supply should be isolated and not interfere with existing traffic signal lights.
- The product should meet the engineering and safety parameters as laid down as per relevant standard
- Tropicalization: Operating temperature upto 50 Degree Celcius, Storage Temperature upto to 45 Degree Celcius, Relative Humidity Up to 90 % non-condensing.
- The LED light modules / light source should be CE certified.



TRIPLE “i” TRAFFIC LIGHT POLE

ILLUMINATED INTELLIGENT INTEGRATED



TRIPLE “i”

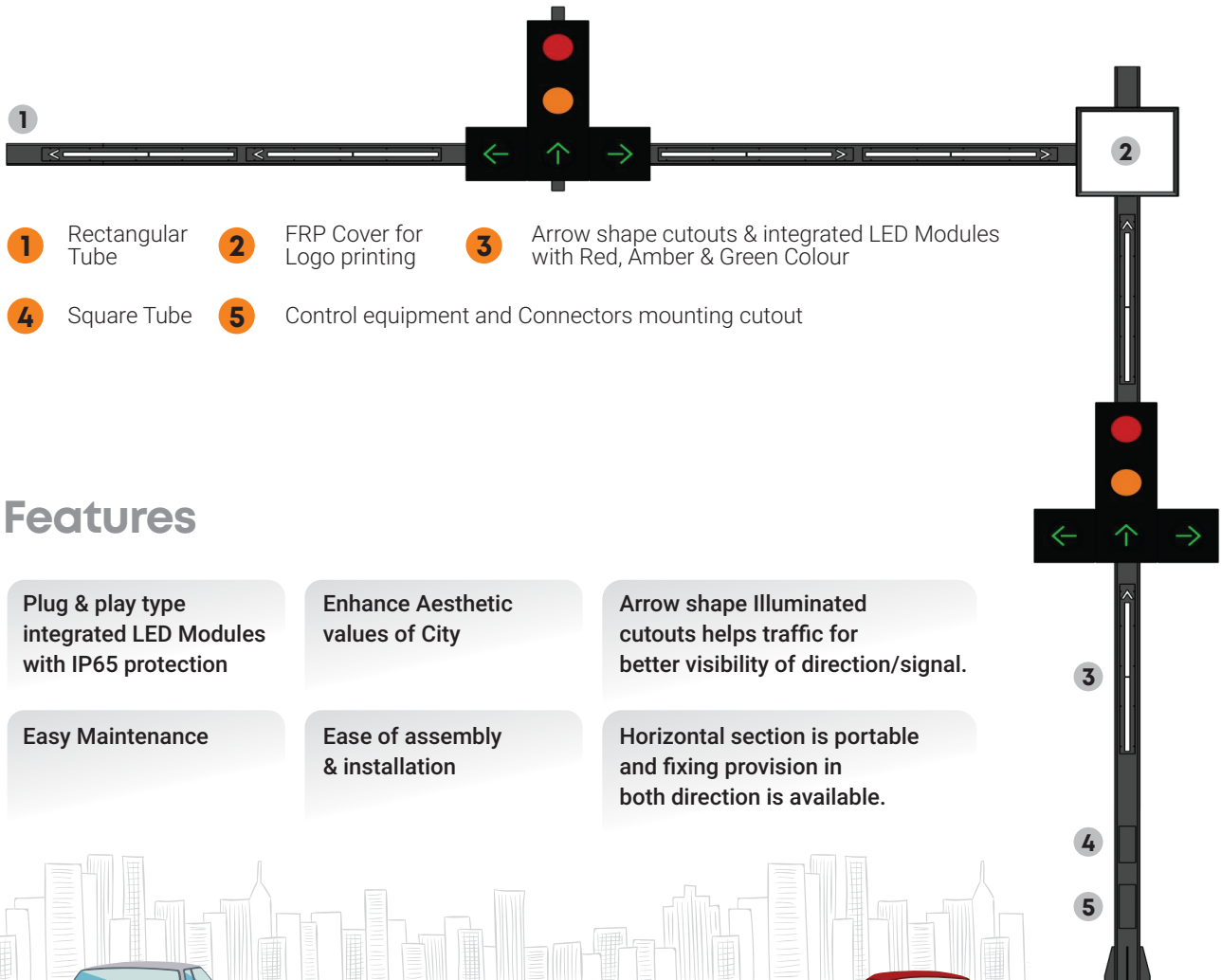
TRAFFIC LIGHT POLE

Modern life and city management processes move to a more high-tech level using the Smart City concept thus the lighting poles, including the ones used for the installation of traffic signs and traffic lights, need be modernized.

We, at Transrail Lighting Limited created a special system with additional luminance and duplication of traffic light colors on a support, that allows us to focus better on the traffic signal and make it more visible, which will help reduce the accidents on the road.

We at Transrail Lighting Limited offer wide range of Luminaires to suit the requirement of every segment, Poles along with other accessories. This give flexibility to combine “old-fashioned” functionality with “New age” fashion elements.

Right Luminaires at Right Place with this lighting solution approach, we bring out the best of the aesthetics of a space while illuminating the spaces.



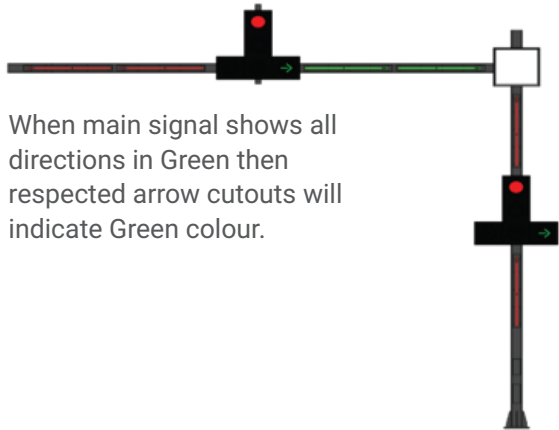
- 1 Rectangular Tube
- 2 FRP Cover for Logo printing
- 3 Arrow shape cutouts & integrated LED Modules with Red, Amber & Green Colour
- 4 Square Tube
- 5 Control equipment and Connectors mounting cutout

Features

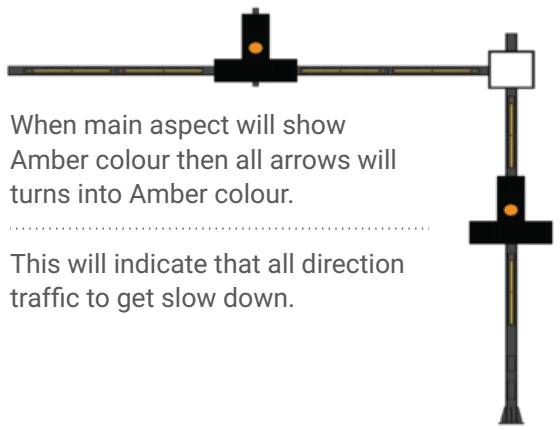
- Plug & play type integrated LED Modules with IP65 protection
- Enhance Aesthetic values of City
- Arrow shape Illuminated cutouts helps traffic for better visibility of direction/signal.
- Easy Maintenance
- Ease of assembly & installation
- Horizontal section is portable and fixing provision in both direction is available.

Functionalities

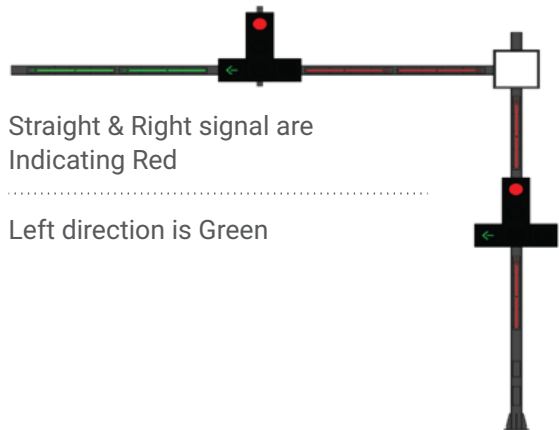
Use Case-1



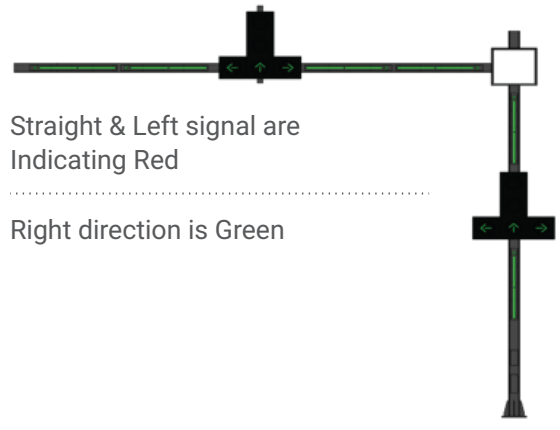
Use Case-2



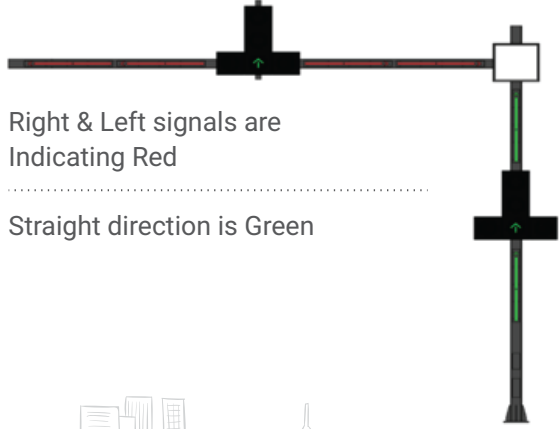
Use Case-3



Use Case-4



Use Case-5



Use Case-6

