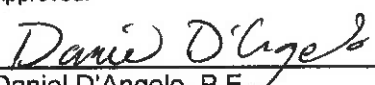


SUPERSEDED BY EB 15-031 EFFECTIVE 9/28/15		New York State Department of Transportation ENGINEERING INSTRUCTION	EI 09-010
Expires one year after issue unless replaced sooner			
Title: TRAFFIC SIGNALS – LIGHT EMITTING DIODE (LED) MODULES			
Distribution: ☒ Manufacturers (18) ☒ Local Govt. (31) ☒ Agencies (32)	☒ Surveyors (33) ☒ Consultants (34) ☒ Contractors (39) ☐ _____ ()	Approved:  Daniel D'Angelo, P.E. Deputy Chief Engineer, Design	4/22/09 Date

ADMINISTRATIVE INFORMATION:

- This Engineering Instruction (EI) is effective upon signature.
- This EI does not supersede any other issuances.

PURPOSE:

To notify designers that according to **the Energy Policy Act of August 2005** incandescent traffic signal bulbs shall not be used in new signal installations and that only certain LED modules are in compliance with the federal energy standards.

TECHNICAL INFORMATION:

The Energy Policy Act of August 2005 established that traffic signal indications, including pedestrian indications, installed after January 1, 2006 have to meet the energy standards that were developed by the former Energy Star Program.

The intent of the Energy Policy Act is to reduce energy consumption by limiting the maximum wattage that signal indications can use while still meeting the Institute of Transportation Engineers (ITE) standards regarding chromaticity and intensity. Therefore, the use of incandescent bulbs for traffic signal indications including pedestrian indications is prohibited and only certain LED modules are allowed.

These standards can be found in section 431.226 of the Energy Conservation Standards that are posted at http://www1.eere.energy.gov/buildings/appliance_standards/pdfs/technical_amendment_101805.pdf

In addition to meeting these energy requirements, LED modules need to be compatible with the Department's current traffic signal control equipment. Consequently, only LED modules that are approved by the Traffic Signals Laboratory shall be used. The latest Qualified Products List (QPL) containing the approved LED manufacturers and part numbers can be found at: www.nysdot.gov/tmes

IMPLEMENTATION:

- All projects involving traffic signal work submitted for the letting of September 3, 2009 or later shall use approved LED modules. The use of incandescent bulbs will no longer be acceptable. Main Office Design Quality Assurance Bureau will insert a copy of the Standard Specification shelf note beginning with projects submitted for the letting of September 3, 2009.
- For all ongoing contracts and for contracts let with references to incandescent bulbs the Engineers-in-Charge shall substitute the appropriate LED items in the Contract and file a copy of this EI in the contract records as documentation of the change in accordance with the Contract Administration

EI 09-010 Page 2 of 3

Manual (CAM) §104-02. Note some of the disapproved items should be replaced with two item numbers.

The following US Customary and Metric items are affected:

Description (US Customary)	Disapproved Items	Replacement Items
Traffic Signal Section - 12inch	680.8101	680.810107
Traffic Signal Section - Polycarbonate, 12 inch	680.8106	680.810601
Traffic Signal Section – 8 inch	680.8103	680.810307
Traffic Signal Section - Polycarbonate, 8 inch	680.8107	680.810701
Traffic Signal Section- Fiberoptic Dual Indication Arrow	680.8104	680.810107 & 680.810108
Traffic Signal Section- Polycarbonate Fiberoptic Dual Indication Arrow	680.810401	680.810601 & 680.810108
Traffic Signal Section- Strobing Signal Indication	680.8105	680.810107 & 680.810101
Traffic Signal Section- Polycarbonate Strobing Signal Indication	680.810501	680.810601 & 680.810101
Pedestrian Signal Section – 4 1/2 inch letters	680.8131	680.813103 & 680.813105
Pedestrian Signal Section – 3 inch letters	680.8132	680.813103 & 680.813105
Pedestrian Signal Section – Fiberoptic	680.8133	680.813103 & 680.813105

Description (Metric)	Disapproved Items	Replacement Items
Traffic Signal Section – 300 mm	680.8101M	680.810107M
Traffic Signal Section – 200 mm	680.8103M	680.810307M
Traffic Signal Section- Fiberoptic Dual Indication Arrow	680.8104M	680.810107M & 680.810108M
Traffic Signal Section- Polycarbonate Fiberoptic Dual Indication Arrow	680.810401M	680.810601M & 680.810108M
Traffic Signal Section- Strobing Signal Indication	680.8105M	680.810107M & 680.810101M
Traffic Signal Section- Polycarbonate Strobing Signal Indication	680.810501M	680.810601M & 680.810101M
Traffic Signal Section- Polycarbonate 300 mm	680.8106M	680.810601M
Traffic Signal Section- Polycarbonate 200 mm	680.8107M	680.810701M
Pedestrian Signal Section – 114 mm	680.8131M	680.813103M & 680.813105M
Pedestrian Signal Section – 76 mm	680.8132M	680.813103M & 680.813105M
Pedestrian Signal Section – Fiberoptic	680.8133M	680.813103M & 680.813105M

EI 09-010 Page 3 of 3

TRANSMITTED MATERIALS: Shelf Note "Traffic Signals – Light Emitting Diode (LED) modules".

CONTACT: Direct questions regarding this EI to Guillermo Ramos of the Traffic Signals Unit at (518) 457-1273 or via e-mail at gramos@dot.state.ny.us

Traffic Signals – Light Emitting Diode (LED) modules

Make the following changes to the Standard Specifications of May 1, 2008:

Delete the following items from §680-5:

- 680.8101 Traffic Signal Section – 12 inch
- 680.8106 Traffic Signal Section - Polycarbonate, 12 inch
- 680.8103 Traffic Signal Section – 8 inch
- 680.8107 Traffic Signal Section - Polycarbonate, 8 inch
- 680.8104 Traffic Signal Section- Fiberoptic Dual Indication Arrow
- 680.810401 Traffic Signal Section- Polycarbonate Fiberoptic Dual Indication Arrow
- 680.8105 Traffic Signal Section- Strobing Signal Indication
- 680.810501 Traffic Signal Section- Polycarbonate Strobing Signal Indication
- 680.8131 Pedestrian Signal Section – 4 1/2 inch Letters
- 680.8132 Pedestrian Signal Section – 3 inch Letters
- 680.8133 Pedestrian Signal Section – Fiberoptic

Make the following changes to the Standard Specifications of May 4, 2006:

Delete the following items from §680-5:

- 680.8101 Traffic Signal Section – 300 mm
- 680.8103 Traffic Signal Section – 200 mm
- 680.8104 Traffic Signal Section- Fiberoptic Dual Indication Arrow
- 680.810401 Traffic Signal Section- Polycarbonate Fiberoptic Dual Indication Arrow
- 680.8105 Traffic Signal Section- Strobing Signal Indication
- 680.810501 Traffic Signal Section- Polycarbonate Strobing Signal Indication
- 680.8106 Traffic Signal Section- Polycarbonate 300 mm
- 680.8107 Traffic Signal Section- Polycarbonate 200 mm
- 680.8131 Pedestrian Signal Section – 114 mm Letters
- 680.8132 Pedestrian Signal Section – 76 mm Letters
- 680.8133 Pedestrian Signal Section – Fiberoptic