

**SPECIFICATION**  
**For**  
**5KV-FAA (TYPE C)**

5kV Airport Lighting Cable  
(5kV, Cu/XLPE)

BY Wachara  
(Wachara Sangsomritphon)

MANAGER, Cable Design Section

APP. Winai  
(Winai Ariyasakulsap)

MANAGER, Development Department

Rev.	Date	Description
0	12/02/2021	Issued specification

APP. \_\_\_\_\_

( )

CUSTOMER

Customer Document	Rev.
-	

**Remark:**

This document is based on the Customer Document for the structure and properties of electric wire and cable only. If there are different points, will be shown in deviation table.

**DESIGNATION : 5KV-FAA (TYPE C)**

**SPEC NO. TYSS 7175 S/R0**

**PAGE No. 1 OF 4**

**REV No. 0**

**SPECIFICATION FOR 5 KV AIRPORT LIGHTING CABLE**

**(5KV-FAA)**

**1. Scope**

This specification covers the general requirements for construction, test and performance of Cross-linked Polyethylene Insulated cables with circular copper conductors for use in airport lighting circuits at rated voltage up to 5KV non-shielded (Classification Type C).

**2. Reference Standard**

The cables shall be manufactured and tested according to ICEA S-96-659.

"Cross-linked-Thermosetting-Polyethylene-Insulated wire and Cable for the Transmission and Distribution of Electrical Energy".

**3. Material and Construction.**

**3.1 Conductor**

The conductor shall be made from round copper wires soft drawn uncoated, concentrically stranded together. Before stranding, the copper wires used shall meet all of the requirements of ASTM Designation B3.

The completed conductor shall conform to the requirements of ASTM Designation B8.

Normally the direction of lay of the outer layer shall be left-hand (S).

**3.2 Conductor Shielding**

The conductor shield shall be a layer of extruded semi-conducting compound.

The minimum thickness shall be not less than 0.0635 mm.

**3.3 Insulation**

The insulation shall be black-colored, track resistance, cross-linked polyethylene (XLPE) processed from peroxide cross-linking agent which contains minimum 0.5 % by weight of carbon black and meet all the requirements as specified in clause 3.1 and 3.7 of ICEA S-66-524.

The average thickness of insulation shall be not less than the specified value.

The minimum thickness shall be not less than 90 % of the value specified.

The thickness of the insulation shall not include that of conductor shield.

The color of insulation shall be black.

**DESIGNATION : 5KV-FAA (TYPE C)**

**SPEC NO. TYSS 7175 S/R0**

**PAGE No. 2 OF 4**

**REV No. 0**

#### **4. Test.**

The cable shall be tested in accordance with Part 6 of ICEA S-96.

Test shall consist of the following items.

4.1 Cable construction test

4.2 Conductor resistance test.

4.3 Insulation resistance test.

4.4 Electrical test on completed cable.

#### **5. Marking**

The marking items shall be marked with suitable means throughout the length of cable.

"  YAZAKI 5KV FAA L-824 TYPE C AIRPORT LIGHTING CABLE # 8 AWG : TYE"

#### **6. Packing.**

The cable shall be wound on the non-returnable wooden reel lagged with suitable wooden boards to protect the cables against damage or any harmful during the delivery.


Each reel shall be clearly marked as follows.

1. Designation "5KV-FAA (TYPE C)"

2. Number of core and size of cable

3. Cable length

4. Net and gross weight

5. Manufacturer's name and/or trade mark "  YAZAKI "

6. Rolling direction of reel

DESIGNATION : 5KV-FAA (TYPE C)

SPEC NO. TYSS 7175 S/R0

PAGE No. 3 OF 4

REV No. 0

**5KV Airport Lighting Cable**

**(5KV-FAA)**

Size	(AWG)	# 8
Conductor :		
Conductor consist	(No./mm)	19/0.76
Conductor diameter	(mm)	3.8
Calculated cross-sectional area	(mm <sup>2</sup> )	8.37
Insulation :		
Nominal thickness	(mm)	2.79
Overall diameter (approx.)	(mm)	11.0
Conductor resistance at 25°C (max.)	(Ohm/km)	2.14
Insulation resistance at 15.6 °C (min.)	(MOhm-km)	2100
A.C test voltage	(kV/5 min)	13
Cable weight (approx.)	(kg/km)	150
Standard length	(m)	1000

DESIGNATION : 5KV-FAA (TYPE C)

SPEC NO. TYSS 7175 S/R0

PAGE No. 4 OF 4

REV No. 0

5KV Airport Lighting Cable

(5KV-FAA (TYPE C))

