

We provide more than composite



Composite Lighting Pole

 **Unicomposite**®

Introduction

Unicomposite's unique fiberglass light pole is design and supplied for both residential and commercial installations. They are strong, lightweight for ease of installation, low in maintenance, fade and chemical resistant. Our light is made to exacting standards, to provide you with the highest quality.. yet are competitively priced.



Advantages

Light Weight and High Strength: The strength of FRP material is similar to alloy steel. The density is between 1.5-2.0, which is 1/4-1/5 of carbon steel. So for the same specification of the lighting pole, the weight of FRP lighting pole is only 1/3 of the steel poles. Based on this feature, the FRP lighting pole is especially suitable for the place which have high load bearing requirement. It's manufactured with a custom designed fiberglass woven roving which allows us to fabricate over 75% of the reinforcing glass in the vertical plane, maximizing desired rigidity and axial strength. The coating materials on all poles are of the highest quality and standard to ensure long lasting and maintenance free beauty.



Low maintenance. The surface of the FRP lighting pole adopt the special spraying material, which can ensure the the color won't have obvious fade in ten years. It do not need maintenance during the life span.

Corrosive Resistance. FRP is a good corrosive resistant material which has preferable resistant ability from atmosphere, water, acid, alkali and many kinds of oil and solvent. Therefore, FRP lighting pole are seasoned with the places which have much rain and coastal cities. There is almost no changes of the pole both inside and outside during the whole life-span. This is an incomparable advantage over other poles. Also the fiberglass pole is ageing and weathering resistant

Non Conductive. FRP is a good insulated material which can applied in insulators. Therefore, FRP lighting pole won't cause electric shock accidents because of creepage. Though the metal lighting poles have ground protection installation, it cannot avoid accidents. FRP lighting have certain advantage in the application which have high safety requirement, such as sidewalk, park, etc.,

Beautiful Appearance and Low Installation Cost. Due to the light weight, it does not need the crane for installation, very convenient and fast. It also save the cost. offers a range of standard colors but we can also match any specified color to tie in with the particular architectural color theme of a building or landscape area.

Strong Wind Resistance. FRP material have slight flexibility. After the wind, the pole can rebound to the original place. The wind resistance principle is similar to bamboo.

Also fiberglass has a significantly greater strength to weight ratio than competitive materials and therefore its lighter weight lowers shipping and on-site handling costs.

Comparison of Composite Light & Normal Light

Item	Composite Lighting	Steel Lighting
Weight	Specific weight 1.86, about 26-32% that of steel. A 3-4meters pole only 2.8-5.3kg, very easy to move	Specific weight 7.80, about 3-4times heavy as composite pole. A 3-4meters pole only 10-20kg, very hard to move
rusting	Never rusting	Even after good power coated, rust may be happed.
installation	Very easy, for it's light, only one or two persons by hand, no need for machines.	Very heavy, so, generally need help of lifter of heavy machines, which add much cost
maintenaince	Completely maintenance free	Need re-coating or refurbish after some time.
Surface finish	Smooth and surface layer can be integrated with the insdie material, so the surface layer will NOT fall off with time	The surface coating often fall off after some time, for the index of expansion afainst temperature is much deferent for metal and surfsce coating, so after time coating is easy to peel off.
insulation	NON conductive, very good insulation	Conductive, have risk for electricity leakage.
Service life	Longer than metal, 35-45years	Shorter life for rusting or corosion
cost	For economic type save 22-40% For advanced type save 10-20%	More expensive than composite pole
Wind resistance	Meet all wind resistant standard. we design different pole structure for different lengthsh and applications	Good, but designable is NOT good.
accessories	We make both pole and accessories sch as base joint, base decoration cover, crossarm, light base, etc.	Need particular design and tooling
Corosion resistance	Very good agaist, water, acid rain, sea water, salty air, chemicals. So can be used I all locations.	Easy to be attacked by water, acid raim amd sea water. So limited in some locations
Heat absorption	Good heat insulation, very low heat absorption, so the pole temperauture not goes much higher than air temperature	Easy to absorpt heat from sun light, so raise the pole temperature very high, which let the coating layer degradation and peels off.
handle	Easy to caryy and transportation, we supply both ready-made pole and accessories, so you don't need to do tube/pipe forming, welding, grinding, acid washing and cleaning, zinc plating and coating	Need lots of labour force, machines and other facilities and resources to do tube/pipe forming, welding, grinding, acid washing and cleaning, zinc plating and coating

Mechanical properties of Unicomposite lighting poles

Tensile strength	~450 N/mm ²
Flex. Elongation	~4.5%
Flexural strength	~370N/mm ²
Flex.E-modules	~30-32 N/mm ²
mpact strength	~ 5N/mm ²
Heat distortion temperature	above maximum of standard

Detailed Specification

Square/ Rectangular lighting pole

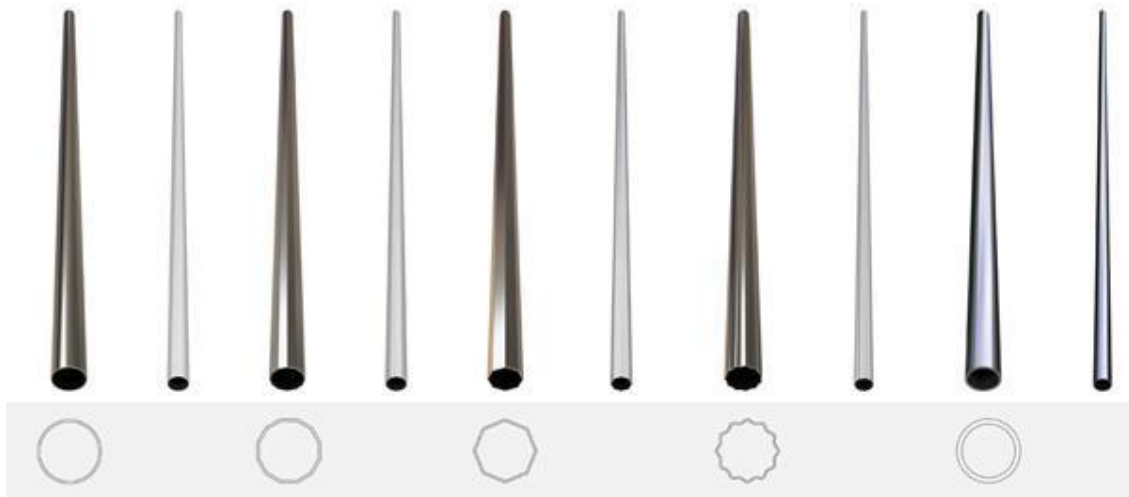


Round lighting pole



Detailed Specification

Taper and various lighting pole



Outdoor Light	Fiberglass Garden Light	Pathway Light	18mm	
			22mm	
			25mm	
			32mm	
			38mm	
			44mm	
			50mm	
			60mm	
			32*32mm square	
			38*38mm square	
			44*44mm square	
			50*50mm square	
			Decorated Light	15.6mm
				18mm
	22mm			
	25mm			
	32mm			
	38mm			
	44mm			
	50mm			
	Bollard	50mm		
		55mm		
		75mm		
		100mm		
		50*50mm square		
		100*100mm square		
	Fiberglass Street Light	Roadside/Park Light	50mm	
			60mm	
			76mm	
			100mm	
			54*54mm	
			64*64mm	
75*75mm				
100*100mm square				
Highway Light		112*92mm rectangular		
		76mm		
		100mm		
		75*75mm		
		100*100mm square		
		112*92mm rectangular		

Outdoor Light		Solar Light	50mm
			55mm
			60mm
			70mm
			76mm
			100*100mm square
			112*92mm rectangular
Indoor Light	Fiberglass Floor Light`		8mm
			9.5mm
			11mm
			12.7mm
			15.6mm
			18mm
			22mm
			25mm
			32mm

All the poles' length is selectable as the customer's requirements.

Application

- Lawn and garden lighting
- Pathway Lighting
- Street Lighting
- Highway Lighting
- Docks / Water Fronts
- Offshore Platform
- Corrosive Area/ Chemical Plants
- Jetty



Round tapered poles are available with two base options, direct Burial type & Anchor base type.

Unique Technology of FRP Lighting Pole

As material science and technology develop fast in modern world, traditional material such as metal and wood can not satisfy people's rigorous needs in many aspects. Composite material starts a revolution in material science and technology for been light, strong, corrosion resistant, long life span and etc.

Unlike metal or wood, FRP is composite material. The FRP products show different mechanical strength in different axial direction. Normally, the tensile strength along continues roving direction (longitudinal direction) is very high which can be compared with steel. However, in transverse direction, the mechanical strength is much weaker.

Unicomposite now confidently claim to world that we are starting a revolution in FRP lighting pole.

With years' study and research, Unicomposite's engineers who are experienced in chemistry and structural mechanics work out an outstanding design of FRP lighting pole. This structure design largely strengthens the mechanical strength of the pole in all directions.

We are now very proud to claim: Unicomposite are the strongest compared with other poles in the same weight, and also the lightest compared with other poles in the same strength.



Why Choose FRP lighting pole

1. Light Weight

---1/4 weight of steel pole, 7/10 weight of aluminum pole

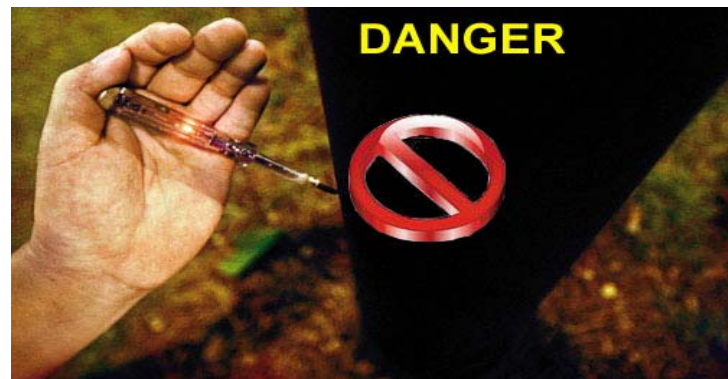
---Only one or two workers needed during installation



2. Non-conductive

---Security guarantee for installation and electric circuit overhaul

---Leakage protection to prevent human and animal from been hurt when pass by



3. Resistant of Corrosion, Rot and Pest

---Corrosion resistant in chemical environment such as costal area and saline-alkali soil area

---Totally immunity to dog urine

---Impervious to termites, wood peckers and other pests



4. Environmental Friendly

---No logging in the forest

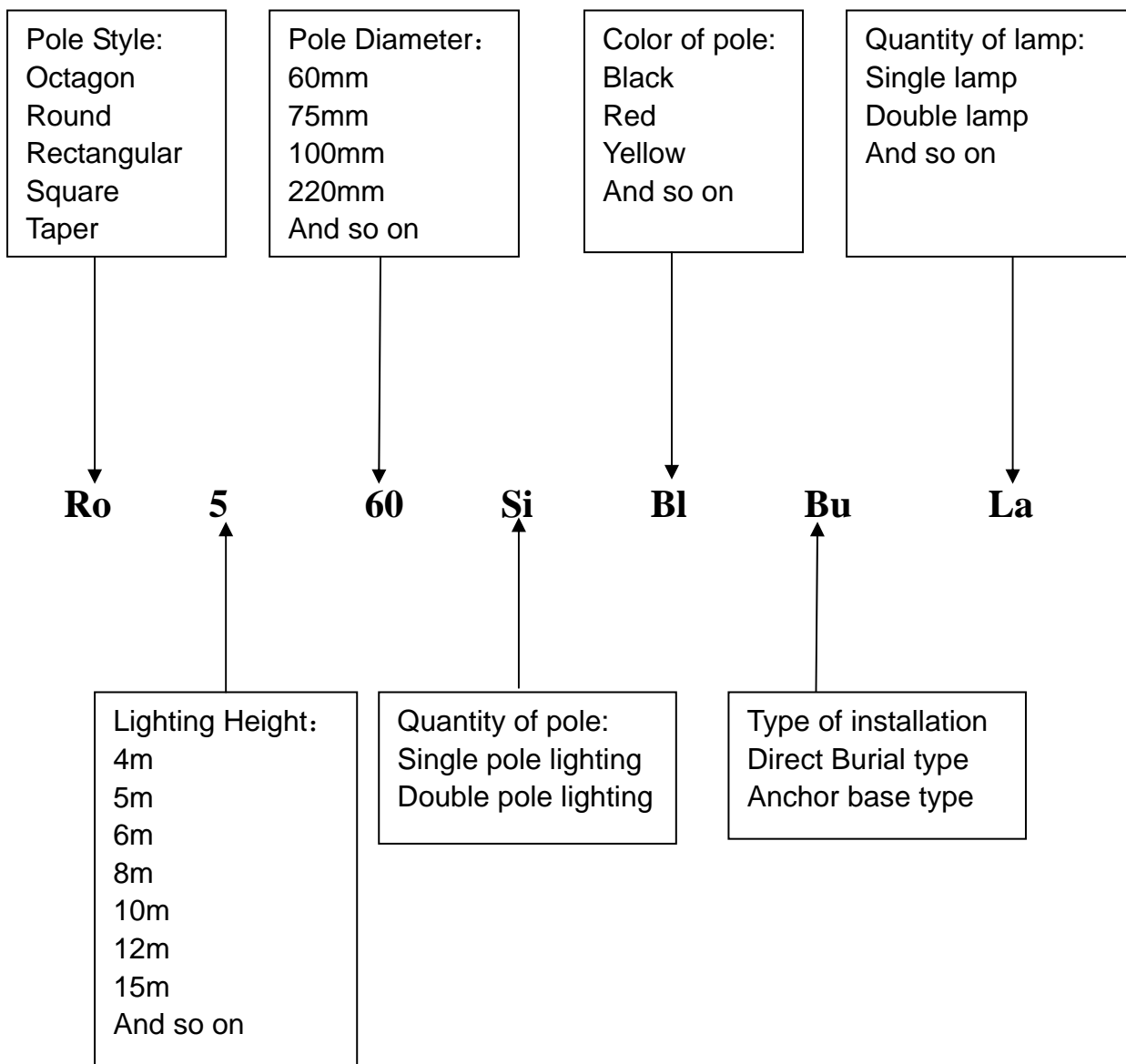
---No releasing of harmful chemicals

Comparison between composite and metal Poles

	FRP	Metal
Density	1.85g/cm ³	Steel: 7.80g/cm ³ Aluminum: 2.69g/cm ³
Rusting	Never rusting	Still rust after certain period even if been coated
Installation	Only need one or two workers	Crane is needed as well as a group of workers
Maintenance	Completely maintenance free	Need re-coating or refurbish after certain period
Insulation	NON conductive, very good insulation	Conductive, will be dangerous when electricity leakage
Service Life	35-45 years	10-20 years
Wind Resistance	Meet all wind resistant standards.	Also Good
Corrosion Resistance	Excellent chemical resistant against water, acid rain, sea water, salty air, saline-alkali soil.	Easy to be attacked by water, acid rain and sea water.
Heat absorption	Good heat insulation, very low heat absorption. Pole temperature will not go much higher than air temperature.	Easy to absorb heat from sun light. Pole temperature rises rapidly, which will make the coating layer peel off.
Handle	Easy to carry and transportation.	Need lots of labor, machines during transportation, loading and unloading.

Order System

Using Order System, customer could choose their favorable lighting quickly from numerous lighting catalogue.



Catalog Number Logic

	B	C	D	E	F	G	H
CPH25-S	Oc	25	9.45	3.94	GR	SL	DB
Catalog Number	Pole Style	Height	Butt Diameter	Tip Diameter	Color	Lamp	Installation Method

B: Unicomposite Lighting Pole Style

Catalog No.	Description
OC	Octagon
TA	Taper

C: Height of Unicomposite Fiberglass Lighting Pole:

Catalog No.	Description
25	25ft
37	37ft
52	52ft
60	60ft

D: Butt Diameter of Unicomposite Lighting Pole

Catalog No.	Description
9.45	9.45 inch
10.23	10.23 inch
10.93	10.93 inch
11.81	11.81 inch

Catalog Number Logic

E: Tip Diameter of Unicomposite Lighting Pole

Catalog No.	Description
3.94	3.94 inch
4.22	4.22 inch
4.51	4.51 inch
4.73	4.73 inch

F: Color of Unicomposite Lighting Pole

Catalog No.	Description
BL	Black
GR	Grey
RE	Red

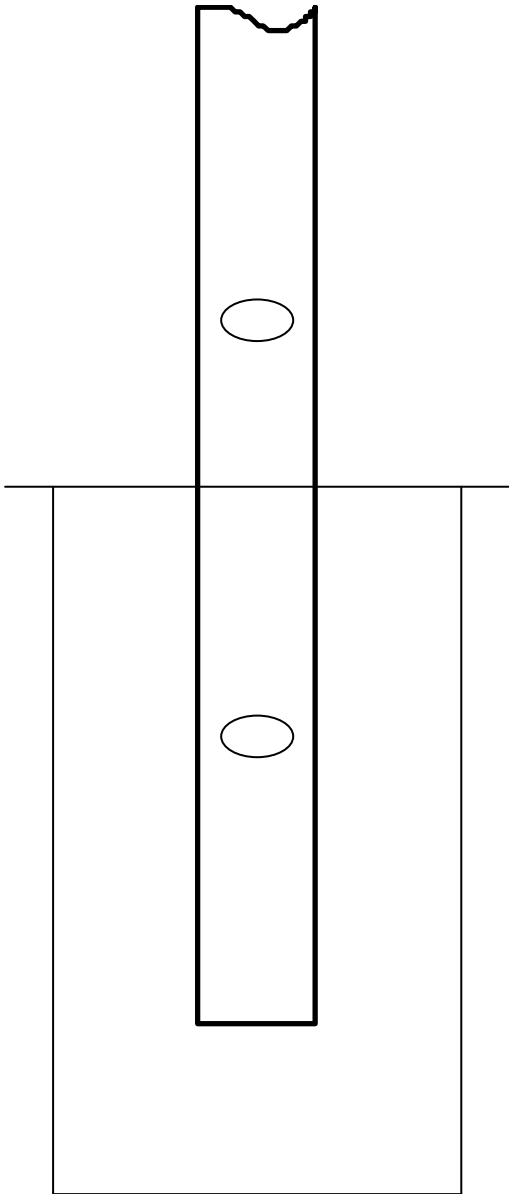
G: Lamp of Unicomposite Lighting Pole

Catalog No.	Description
SL	Single Lamp
DL	Double Lamp
TL	Triple Lamp

H: Installation Method of Unicomposite Lighting Pole

Catalog No.	Description
DB	Direct Burial
AB	Anchor Base

Direct Burial Pole Installation Guide



Installation Procedure of Direct Burial Pole:

1. Dig a hole that is wider than the bottom of the pole, the suggest depth (dimension D) is as below:

From 18ft to 25ft : suggest 4ft depth

From 25ft to 40ft : suggest 5ft depth

From 40ft to 50ft : suggest 6ft depth

2. Get off the plastic film which wrap the pole, put the pole in the middle of the hole. Make the cable in correct orientation.

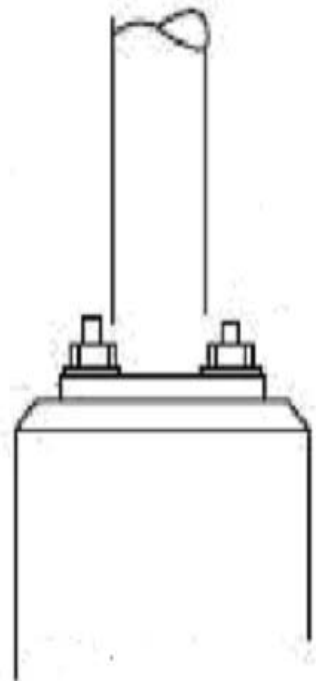
3. Make the pole upright, and then fill the hole with solid, and use concrete to the pole.

4. Put through the wire with the electrical power.

Anchor Base Installation Guide

Installation Procedure of Anchor Base Pole:

1. According to the shape of the base, make the suitable hole, which the size and shape are both appropriate to for the base.
2. Choose the suitable depth for the anchor bolt which is burial in the solid.
3. Upright the base and fill the hole with solid, and use concrete to make the base fixed.
4. When the foundation is well, attach nuts to the anchor bolts and make sure all nuts are in the same level.
5. When set up the pole onto the nuts, thread the wires into the poles.
6. Connect all wires at the hand hole.



Light Load

Unicomposite fiberglass taper lighting



Unicomposite Catalog Code	Pole Length ft	Dimension inch		Arm Length ft
		Bottom	Tip	
CPL15-S	15	6.29	2.76	0.98
CPL17-S	17	6.45	2.89	0.98
CPL20-S	20	6.61	3.02	0.98
CPL23-S	23	6.77	3.15	1.15
CPL27-S	27	6.96	3.28	1.15
CPL30-S	30	7.09	3.54	1.15
CPL15-D	15	6.29	2.76	1.48
CPL16-D	16	6.32	2.81	1.48
CPL19-D	19	6.57	2.95	1.48
CPL18-D	22	6.71	3.11	1.64
CPL19-D	26	6.86	3.21	1.64
CPL20-D	30	7.09	3.54	1.64

Middle Load



Unicomposite Catalog Code	Pole Length ft	Dimension inch		Arm Length ft
		Bottom	Tip	
CPM20-S	20	7.85	3.15	1.97
CPM23-S	23	8.18	3.27	1.97
CPM27-S	27	8.51	3.39	1.97
CPM30-S	30	8.84	3.51	1.97
CPM33-S	33	9.17	3.63	2.62
CPM37-S	37	9.50	3.75	2.62
CPM40-S	40	9.85	3.94	2.62
CPM20-D	20	7.85	3.15	2.46
CPM24-D	24	8.21	3.34	2.46
CPM28-D	28	8.59	3.42	2.46
CPM31-D	31	8.93	3.58	2.46
CPM35-D	35	9.23	3.69	3.28
CPM38-D	38	9.60	3.80	3.28
CPM40-D	40	9.85	3.94	3.28

Heavy Load

Unicomposite Catalog Code	Pole Length ft	Dimension inch		Arm Length ft
		Bottom	Tip	
CPH25-S	25	9.45	3.94	2.32
CPH28-S	28	9.65	4.01	2.32
CPH31-S	31	9.83	4.09	2.32
CPH34-S	34	10.01	4.16	2.32
CPH37-S	37	10.23	4.22	2.32
CPH40-S	40	10.44	4.29	2.32
CPH43-S	43	10.59	4.36	2.32
CPH46-S	46	10.70	4.43	2.98
CPH49-S	49	10.93	4.51	2.98
CPH52-S	52	11.30	4.59	2.98
CPH57-S	57	11.53	4.66	2.98
CPH60-S	60	11.81	4.73	2.98
CPH25-D	25	9.45	3.94	2.95
CPH27-D	27	9.60	3.99	2.95
CPH32-D	32	9.88	4.13	2.95
CPH36-D	36	10.18	4.19	2.95
CPH41-D	41	10.49	4.32	2.95
CPH45-D	45	10.62	4.39	2.95
CPH48-D	48	10.85	4.47	3.61
CPH53-D	53	11.39	4.62	3.61
CPH56-D	56	11.49	4.65	3.61
CPH60-D	60	11.81	4.73	3.61
CPH29-T	29	9.72	4.05	3.21
CPH35-T	35	10.09	4.17	3.21
CPH42-T	42	10.53	4.34	3.21
CPH47-T	47	10.79	4.45	3.92
CPH55-T	55	10.42	4.64	3.92
CPH60-T	60	11.81	4.73	3.92

Accessories : Arm & Base

Base:

For anchor base fiberglass lighting, we provide various bases for customer choose.

The following pictures show the style of the anchor base, the customer could have several choices according to their need and requirement.

