

FUTURA HE



180
lm/W

... high efficiency, with sulphur-resistant LED chips.

USE

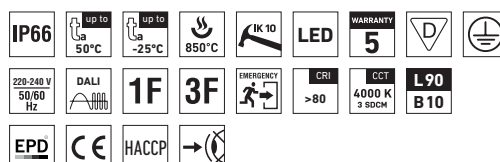
The light fitting is suitable for industrial indoor and outdoor roofed spaces, warehouses, sports areas, workshops, garages, transport terminals, utility structures and laboratories without a danger of explosion of gas, dust and combustible fumes.

The light fitting is resistant to dust, moisture and spouting water. The body and the diffuser made of polycarbonate (PC) have the increased resistance against deformation and impact.

(It is necessary to consider exhalation in the air which can reduce the usability of the plastic and aluminium at installations in an aggressive environment, see also page 367).

ADVANTAGES

- Light fitting protection **IP66**
- Maximum ambient temperature up to **t_a = 50 °C**
- Lifetime: 50,000 hours / L90B10
- Diffuser: translucent polycarbonate (PC) = high mechanical resistance
- Body: grey polycarbonate with Al coolers (PC Al) = high mechanical resistance
- Up to 55 % lower electricity consumption when compared to tubes T5
- In DALI version possibility of constant luminous flux for whole lifetime (CLO)
- Constant luminous flux even in ambient temperature of -25 °C
- Standard model - CRI > 80: 4000 K
- It can be delivered in dimmable or emergency version
- Through-wiring of up to 10 wires at body
- **Chips with high sulphur resistance**
- Long lifetime due to low thermal resistance

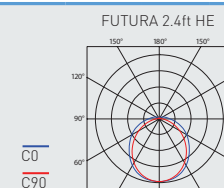
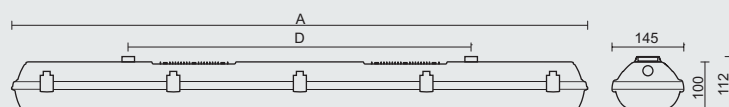


FUTURA HE PC Al, PCc Al



TECHNICAL DESCRIPTION

- Light fitting protection: IP66
- Maximum ambient temperature: $t_a = 50^\circ\text{C}$, Maximum ambient temperature: $t_a = 0-25^\circ\text{C}$ (version with emergency back-up source for 1 or 3 hours; M1h, M3h)
- Maximum system efficacy: 180 lm/W
- The watt and lumen values can vary by $\pm 7,5\%$
- Standard model - CRI > 80: 4000 K
- MacAdam = 3 SDCM
- Lifetime: 50,000 hours / L90B10
- Diffuser: translucent polycarbonate (PC), UV stable, impact-resistant
- Body: grey polycarbonate with Al coolers (PC Al), UV stable, impact-resistant
- Reflector: steel sheet, white colour (RAL 9003)
- Clips: polyamide + 15 % glass fibre or stainless steel + polyamide
- Sealing: polyurethane (PUR), foamed body groove
- Cable glands: screwed PG 13.5
- Distance part: polyamide + 10 % glass fibre
- Terminal block: screwless, three-pole (basic version)
- Installation: package contains stainless hooks and stainless brackets
- Electric equipment: LED sulphur-resistant modules, current driver or current driver DALI



Type	Max. ambient temperature [°C]	Luminous flux of LED modules [lm]	Luminous flux of light fitting [lm]	Power consumption [W]	System efficacy [lm/W]	UGR Longitudinal/transverse	Net weight [kg]	A [mm]	D [mm]
For ambient temperature $t_a = 50^\circ\text{C}$ - body: grey polycarbonate with Al coolers - diffuser: translucent polycarbonate									
FUTURA 2.2ft HE PC Al 3200/840	50	3335	3130	18,6	168	24.1 / 22.0	1,45	612	475
FUTURA 2.2ft HE PC Al 4400/840	45	4520	4250	25,2	169	25.0 / 23.2	1,45	612	475
FUTURA 2.2ft HE PC Al 6400/840	35	6650	6250	35,9	174	26.5 / 24.4	1,45	612	475
FUTURA 2.4ft HE PC Al 6400/840	50	6690	6290	36,0	175	24.3 / 22.4	2,45	1172	700
FUTURA 2.4ft HE PC Al 8800/840	45	9140	8590	48,6	177	25.3 / 23.5	2,45	1172	700
FUTURA 2.4ft HE PC Al 12800/840	35	15610	14670	81,7	180	27.2 / 25.4	2,65	1172	700
FUTURA 2.5ft HE PC Al 8000/840	50	8330	7830	44,1	178	24.2 / 22.5	2,95	1452	940
FUTURA 2.5ft HE PC Al 11000/840	45	13200	12410	69,8	178	25.8 / 24.1	2,95	1452	940
FUTURA 2.5ft HE PC Al 16000/840	35	19400	18240	101,2	180	27.2 / 25.4	3,25	1452	940
FUTURA 2.5ft HE PC Al 22000/840	35	23220	21830	127,2	172	27.8 / 26.1	3,25	1452	940

FUTURA HE PC Al

Non-dimmable driver - plastic clips

Code	Type	1F	3F	M1h	M3h	3F M1h	3F M3h
11000	FUTURA 2.2ft HE PC Al 3200/840	x	x	11001	11002	x	x
11010	FUTURA 2.2ft HE PC Al 4400/840	x	x	11014	11015	x	x
11003	FUTURA 2.2ft HE PC Al 6400/840	x	x	11004	11005	x	x
11006	FUTURA 2.4ft HE PC Al 6400/840	11007	11008	11009	11011	11012	11013
11020	FUTURA 2.4ft HE PC Al 8800/840	11021	11023	11024	11025	11026	11027
11016	FUTURA 2.4ft HE PC Al 12800/840	11017	11018	x	x	x	x
11019	FUTURA 2.5ft HE PC Al 8000/840	11022	11028	11029	11032	11038	11039
11030	FUTURA 2.5ft HE PC Al 11000/840	11031	11033	11034	11035	11036	11037
11041	FUTURA 2.5ft HE PC Al 16000/840	11042	11043	x	x	x	x
103406	FUTURA 2.5ft HE PC Al 22000/840	103407	103408	x	x	x	x

FUTURA HE PCc Al

Non-dimmable driver - stainless clips (c)

Code	Type	1F	3F	M1h	M3h	3F M1h	3F M3h
11046	FUTURA 2.2ft HE PCc Al 3200/840	x	x	11047	11048	x	x
11040	FUTURA 2.2ft HE PCc Al 4400/840	x	x	11044	11045	x	x
11049	FUTURA 2.2ft HE PCc Al 6400/840	x	x	11052	11058	x	x
11059	FUTURA 2.4ft HE PCc Al 6400/840	11062	11068	11069	11071	11072	11073
11050	FUTURA 2.4ft HE PCc Al 8800/840	11051	11053	11054	11055	11056	11057
11076	FUTURA 2.4ft HE PCc Al 12800/840	11077	11078	x	x	x	x
11079	FUTURA 2.5ft HE PCc Al 8000/840	11082	11088	11089	11092	11098	11099
11060	FUTURA 2.5ft HE PCc Al 11000/840	11061	11063	11064	11065	11066	11067
11101	FUTURA 2.5ft HE PCc Al 16000/840	11102	11103	x	x	x	x
103412	FUTURA 2.5ft HE PCc Al 22000/840	103413	103414	x	x	x	x

FUTURA HE PC Al DALI

Code	Type
11106	FUTURA 2.2ft HE PC Al 3200/840 DALI
11070	FUTURA 2.2ft HE PC Al 4400/840 DALI
11109	FUTURA 2.2ft HE PC Al 6400/840 DALI
11119	FUTURA 2.4ft HE PC Al 6400/840 DALI
11080	FUTURA 2.4ft HE PC Al 8800/840 DALI
11133	FUTURA 2.4ft HE PC Al 12800/840 DALI
11136	FUTURA 2.5ft HE PC Al 8000/840 DALI
11090	FUTURA 2.5ft HE PC Al 11000/840 DALI
11143	FUTURA 2.5ft HE PC Al 16000/840 DALI
103411	FUTURA 2.5ft HE PC Al 22000/840 DALI

Digital dimmable driver DALI - plastic clips

1F	3F	M1h	M3h	3F M1h	3F M3h
x	x	11107	11108	x	x
x	x	11074	11075	x	x
x	x	11112	11118	x	x
11122	11128	11129	11130	11131	11132
11081	11083	11084	11085	11086	11087
11134	11135	x	x	x	x
11137	11138	11139	11140	11141	11142
11091	11093	11094	11095	11096	11097
11144	11145	x	x	x	x
103409	103410	x	x	x	x

FUTURA HE PCc Al DALI

Code	Type
11146	FUTURA 2.2ft HE PCc Al 3200/840 DALI
11100	FUTURA 2.2ft HE PCc Al 4400/840 DALI
11149	FUTURA 2.2ft HE PCc Al 6400/840 DALI
11152	FUTURA 2.4ft HE PCc Al 6400/840 DALI
11110	FUTURA 2.4ft HE PCc Al 8800/840 DALI
11159	FUTURA 2.4ft HE PCc Al 12800/840 DALI
11162	FUTURA 2.5ft HE PCc Al 8000/840 DALI
11120	FUTURA 2.5ft HE PCc Al 11000/840 DALI
11169	FUTURA 2.5ft HE PCc Al 16000/840 DALI
103415	FUTURA 2.5ft HE PCc Al 22000/840 DALI

Digital dimmable driver DALI - stainless clips (c)

1F	3F	M1h	M3h	3F M1h	3F M3h
x	x	11147	11148	x	x
x	x	11104	11105	x	x
x	x	11150	11151	x	x
11153	11154	11155	11156	11157	11158
11111	11113	11114	11115	11116	11117
11160	11161	x	x	x	x
11163	11164	11165	11166	11167	11168
11121	11123	11124	11125	11126	11127
11170	11171	x	x	x	x
103416	103417	x	x	x	x

Example of type marking: 11116 = FUTURA 2.4ft HE PCc Al 8800/840 DALI **3F M1h**

LEGEND

1F	1-phase 3 core through-wiring in the luminaire
3F	3-phase 5 core through-wiring in the luminaire
M1h	emergency back-up source with 1 hour operating time for maintained emergency illumination
M3h	emergency back-up source with 3 hour operating time for maintained emergency illumination
3F Mxh	3-phase 5 core through-wiring in the luminaire (L3 used for emergency unit unswitched power supply)

DALI	version with digital dimmable driver DALI
DALI 1F	1-phase 5 core through-wiring in the luminaire
DALI 3F	3-phase 7 core through-wiring in the luminaire
DALI 3F Mxh	3-phase 7 core through-wiring in the luminaire (L3 used for emergency unit unswitched power supply)

LIGHT FITTING ATTACHMENT

- a) Directly to a ceiling or a wall with the use of screws and stainless brackets
 b) Suspension with the use of stainless hooks
 c) Attachment with the use of side hangers to the wall - is not included in accessories



LIGHT FITTING DETAILED VIEW

FUTURA HE

