ARTC

NEW EQUIPMENT AND SYSTEM APPROVAL CERTIFICATE

Certificate No. S 02-1510-177

Approval date	30/03/2016
Approved by	GM Technical Standards
Report no.	TAS 02-1510-UGL177
Report date	19/10/2015

This certificate is issued to

Supplier	UGL Limited 373 Horsley Road, Milperra NSW, Australia 2214

In respect of

Manufacturer	UGL Limited
Product description	UGL Limited LED signal light units
Item identification	1. UGL DC AL8 Extended Range Mainline 2. UGL Tricolour Standard Range Mainline 3. UGL Mk2 212mm Standard Range Mainline 12Vdc 4. UGL Mk2 127mm Red LED Signals (12Vdc, 120Vac & Retrofit Kit)
Application	ARTC Network Wide
Relevant Standards	SPS 11 Light Signals
Conditions of Approval	1. For use in accordance with ARTC specification SDS25 and standard typical circuits only. 2. LEDs suitable for wayside signals only. 3. Not suitable for use in tunnels. 4. All main signal head at a site (included in the same circuit book), which use LED signal light units, shall use units from one supplier's range. 5. All unused connections in the plug coupler on the light unit shall be blanked with discrimination pins. 6. Unless otherwise specified, items with approvals for earlier versions still valid may be retained and reinstalled in existing installations, or upgraded to any later version with the relevant updating of site installation records.

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7. UGL to label the inside of each case/equipment with the corresponding part number.

A general condition of approval is that the supplier remains accredited to ISO 9001 specifically for these products and ARTC is advised on a 12 monthly basis that accreditation is current. ARTC reserves the right to conduct its own audit of the manufacture and supply of these components to AS 19011.

Any subsequent change to the design, materials or manufacturing process is not covered by this approval. The manufacturer should notify ARTC of any modification or changes in order to obtain a valid updated certificate.

Note/Comments This type approval certificate supersedes the following documentation **02-0510-013a** and **08-08-10-020**.

Issue date

Expiry date

Issued by **John Furness**
ARTC Manager Standards

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Approved Item list - Certificate No. S 02-1510-177

UGL Catalogue No.	Approved Version	Catalogue No. (Legacy)	Aspect (mm)	Voltage	Description	Product Version Description (PVD) No.	Notes	Conditions of Use
DC AL8 Extended Range Mainline								**Sighting distance > 2.3km**
1000010755	5.X	R999-X1449 1000010782	212	12 Vdc	LED MODULE (White) AL8 12VDC 212MM *1	01_06_42_04 Rev 1.0		'Lamp proving' sensing element min. drop away value > 1.3A.
1000010756	5.X	R999-X1052 1000010163	212	12 Vdc	LED MODULE (Red) AL8 12VDC 212MM *1	01_06_42_02 Rev 1.0		'Lamp proving' sensing element min. drop away value > 1.3A.
1000010162	5.X	R999-X1051	212	12 Vdc	LED MODULE (Yellow) AL8 12VDC 212MM *1 & *2	01_06_42_03 Rev 1.0		'Lamp proving' sensing element min. drop away value > 1.3A.
1000010161	5.X	R999-X1050	212	12 Vdc	LED MODULE (Green) AL8 12VDC 212MM *1 & *2	01_06_42_01 Rev 1.0		'Lamp proving' sensing element min. drop away value > 1.3A.
Tricolour Standard Range Mainline								**Sighting distance > 0.5km**
1000010559	10.X	R999-X1066	212	120 Vac	SIGNAL TRI-COLOUR LED (MEDIUM) RYG FOP-PTC	01_08_42_01 Rev 2.0	Contains Tricolour 120 Vac LED module 1000009963	Red aspect must be double switched. Power pack to be Issue 3 or later. Cable length feeding light unit < 1km.
Mk2 Standard Range Mainline 120V AC								**Sighting distance > 0.5km**
1000010073	9.X	R999-X0916	212	120 Vac	LED MODULE (Red) MK2 120VAC 212MM	01_02_42_01 Rev 2.0		
1000010074	9.X	R999-X0917	212	120 Vac	LED MODULE (Yellow) MK2 120VAC 212MM	01_02_42_02 Rev 2.0		
1000010075	9.X	R999-X0918	212	120 Vac	LED MODULE (Green) MK2 120VAC 212MM	01_02_42_03 Rev 2.0		

*1 *'Lamp proving' circuitry shall be series relay coil or current transformer based. Light unit feed circuit shall be entirely mechanically switched (relay based).*

*2 *Subject to acceptance of test documentation confirming current consumption, visibility, chromaticity and intensity of the light output.*

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UGL Catalogue No.	Approved Version	Catalogue No. (Legacy)	Aspect (mm)	Voltage	Description	Product Version Description (PVD) No.	Notes	Conditions of Use
Mk2 Standard Range Mainline 12V DC								**Sighting distance > 0.5km**
1000010174	9.X	R999-X1081	212	12 Vdc	LED RETROKIT (Green) 212MM 12VDC MLK UGL	01_02_42_06 Rev 2.0	Contains Green 12Vdc LED module 1000010090	For use with Microlok interlockings.
1000010175	9.X	R999-X1082	212	12 Vdc	LED RETROKIT (Yellow) 212MM 12VDC MLK UGL	01_02_42_05 Rev 2.0	Contains Yellow 12 Vdc LED module 1000010091	For use with Microlok interlockings.
1000010176	9.X	R999-X1083	212	12 Vdc	LED RETROKIT (Red) 212MM 12VDC MLK UGL	01_02_42_04 Rev 2.0	Contains Red 12 Vdc LED module 1000010092	For use with Microlok interlockings.
Mk2 Subsidiary Aspect 120V DC								**Sighting distance > 150m**
1000010076	7.X	R999-X0919	127	120 Vac	LED MODULE (Red) MK2 120VAC 127MM	01_15_42_01 Rev 3.0		
1000010077	7.X	R999-X0920	127	120 Vac	LED MODULE (Yellow) MK2 120VAC 127MM	01_15_42_02 Rev 2.0		
1000010078	7.X	R999-X0921	127	120 Vac	LED MODULE (Green) MK2 120VAC 127MM	01_15_42_03 Rev 2.0		
1000010093	7.X	R999-X0941	127	120 Vac	LED MODULE (L/White) MK2 120VAC 127MM	01_15_42_04 Rev 2.0		
Mk2 Subsidiary Aspect 12V DC								**Sighting distance > 150m**
1000010242	7.X	R999-X1190	127	12 Vdc	LED RETROKIT (Green) 127MM 12VDC MLK UGL	01_15_42_08 Rev 2.0	Contains Green 12 Vdc LED module 1000010079	For use with Microlok interlockings.
1000010243	7.X	R999-X1191	127	12 Vdc	LED RETROKIT (Yellow) 127MM 12VDC MLK UGL	01_15_42_07 Rev 2.0	Contains Yellow 12 Vdc LED module 1000010080	For use with Microlok interlockings.
1000010244	7.X	R999-X1192	127	12 Vdc	LED RETROKIT (Red) 127MM 12VDC MLK UGL	01_15_42_06 Rev 2.0	Contains Red 12 Vdc LED module 1000010081	For use with Microlok interlockings.
1000010245	7.X	R999-X1193	127	12 Vdc	LED RETROKIT (White) 127MM 12VDC MLK UGL	01_15_42_09 Rev 2.0	Contains White 12 Vdc LED module 1000010681	For use with Microlok interlockings.