

## NEW EQUIPMENT AND SYSTEM APPROVAL CERTIFICATE

**Certificate No.** S 02-1705-211  
**Approval date** 04/01/2018  
**Approved by** GM Technical Standards  
**Report no.** TAR 02-1705-AR-211  
**Report date** 5 December 2017

*This certificate is issued to*

**Supplier** Aldridge Railway Signals Pty Ltd  
 44 Adderley Street East,  
 Lidcombe.2141.  
 New South Wales.  
 Australia

*In respect of*

**Manufacturer** Aldridge Railway Signals Pty Ltd  
**Product description** Aldridge RK503FL-1 Level Crossing LED  
**Item identification** Refer to Approved Item List in Table 1  
**Application** ARTC Network Wide  
**Relevant Standards** SPS 02 Environmental Conditions  
 SPS 05 Electrical & Electronic Components (Ratings & Construction Requirements)  
 SPS 11 Light Signals  
 ESC 03 01 Level Crossing Equipment

### Conditions of Approval

<b>General</b>	1. There are no field serviceable components within the LED modules, any failed units shall be replaced. Units shall only be repaired by the manufacturer.
	2. Where Cerberus monitoring is in use, The RK503FL-1 modules can't be retrofitted at a site that has RG4 of FL-03 LED's without undertaking a complete change out to RK503FL-1 modules at the location.
	3. The Cerberus generic expression shall be updated to include the RK503FL-1 LED.
<b>Supplier</b>	4. 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 AS19001:2003.

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	<p>5. 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.</p> <p>6. The supplier/manufacturer must advise ARTC of any changes made to the product or system which may alter its identification, performance characteristics, form, fit, function or processes required for correct usage so that this approval can be revised or reviewed.</p> <p>7. The supplier/manufacturer shall notify ARTC within a reasonable time period of any incidents involving the reliable and safe operation of these LEDs in any railway that uses the item.</p>
<b>Designer</b>	<p>8. The circuit design shall nominate the type of LED and detail this on the circuit drawings.</p> <p>9. A level crossing shall have all of the LEDs as type RK503FL-1 when these are used.</p> <p>10. This LED shall only be used on level crossings where the road authority has defined the safe stopping distance as less than 250 metres.</p> <p>11. The design of the signal focusing plan shall ensure that the road vehicle nominated safe stopping distance point and all points on the approach road are within the perpendicular focus line <math>+ / - 10^\circ</math>.</p> <p>12. The design of the back lights on the signal focusing plan are aimed for vehicles close to the level crossing. The design may consider the lights having a spread of <math>+ / - 15^\circ</math> from the perpendicular.</p>
<b>Signal Installer and Signal Maintainer</b>	<p>13. The signal technician shall ensure that the LED is aligned (within <math>+ / - 10^\circ</math> of perpendicular) so that it can be readily viewed from a motor vehicle continuously from the nominated safe stopping distance point up to the level crossing.</p>

**Note/Comments**                      NIL.

**Issue date**                      4/1/2018

**Expiry date**                      N/A

**Issued by**

**John Furness**   
**ARTC Manager Standards**

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**Table 1 - Approved Item List – Aldridge RK503FL-1 Level Crossing LED units**

The following lists the individual relay products manufactured by Aldridge Railway Systems Ltd which are type approved for use in signalling installations on ARTC infrastructure under Type Approval Certificate **S 02-1105-211** subject only to any conditions shown on that Certificate and the Conditions of Use shown against individual types.

Part No.	Description	Voltage	Current Consumption	Intensity
RK503FL-1	200mm Red Level Crossing LED	12V dc	1A @ 12V	600 Cd
RL503FL	Complete housing with hood and background etc. Includes the RK503FL-1 module	12V dc	1A @ 12V	600 Cd