LUMOS LED HANDRAIL BRACKET

INSTALLATION INSTRUCTIONS

Welcome to a new concept in safety lighting for stairways and access routes.

The LUMOS LED HANDRAIL BRACKET designed and manufactured by Miles Nelson Manufacturing Ltd combines the functions of Bannister Bracket and Safety Lighting into one convenient product.

SOME IMPORTANT POINTS TO NOTE BEFORE YOU BEGIN INSTALLING.

- The light source is a Superbright LED lamp of 12Volt DC nominal rating. The lamps are voltage sensitive and a regulated power supply must be used. Please use only the Miles Nelson Regulated Power adaptor sold separately. This adaptor is designed to be permanently mounted within the wall cavity and connected to the 230VAC supply from a light switch. Alternatively the power adaptor can be mounted on an external wall surface and connected to a 230VAC supply from a wall plug or other approved switching device. Installation should only be carried out by a Registered Electrical Contractor.
- FIG 1 shows the requirements for mounting a handrail support bracket as per the Building Industry Authority Approved Document D1. Take a moment to familiarise yourself with these requirements for the bracket to be mounted so that the rail is between 900mm and 1000mm above the pitch line.
- Remember that the purpose of a bannister bracket is to provide secure mounting for the handrail for use in case of a slip or fall. The handrail bracket must be fitted to the wall at points where secure mounting is available – eg where wall studs or bracing is available behind the wall lining. We recommend that walls be suitably braced before pre-wiring takes place. This allows for more choice in achieving acceptable spacing of the brackets and also allows for convenient fixing of the wiring prior the wall linings being attached.

INSTALLATION.

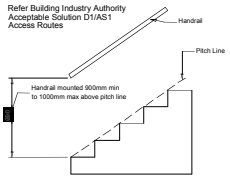


Fig1

Step 1. Ascertain the number of Lumos brackets required. We recommend 1 bracket every 900 - 1000mm measured along the rail line. This is the design spacing to ensure overlapping of the light pools. Spacings less than 900 - 1000mm are acceptable but beware of spacing the brackets more than 1000mm apart as you will start to form dark areas where the light pools do not overlap.

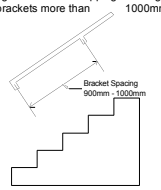


Fig2

Step 2. Pre-wire wall cavity. Note! The LED lamps must be wired in parallel configuration. To ascertain the point at which to leave wiring exiting the wall cavity decide at what height between 900mm and 1000mm the rail is to be installed. Subtract from this figure 105mm. Mark a line at this height parallel to the pitch line and drill 10mm diam holes at bracket centres established in step 1. Pre-wire using 0.5mm 2 core cable. NOTE! Unlike quartz lamps LED lamps are very low power (0.5W @ 12VDC) and voltage drop over length of run is not a significant problem. Install power adaptor into wall cavity or leave until later if mounting externally on wall surface.

Step 3. Install Wall Mount Bracket. Wall Mount bracket comes c/w light holder and connector block already assembled and wired. As in step 2 determine the height the rail is to be installed. Subtract from this figure 62mm and mark off a line parallel to the pitch line at this height. Fix wall mount bracket to the wall using the top countersunk hole (see Fig 3) NOTE! Only fix the wall bracket with one screw at this stage. The bottom 2 holes are used to locate the wall bracket and the banister bracket later. Connect wiring to terminal block. Note polarity markings on the wall bracket.
Connect power adaptor and test installation by Installing lights into lampholders. Note that the lamps are polarised. They are protected if installed back to front. Simply remove and reverse polarity. Lamp must be removed to carry out step 4.

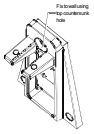
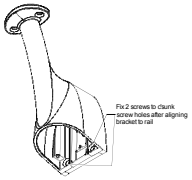


Fig 3

Step 4. Install Bannister bracket. Slide banister bracket over wall bracket from top until bracket is firmly engaged. Check that the 2 countersunk holes at the bottom of the banister bracket line up with the 2 holes in the bottom of the wall bracket. At this stage the wall bracket is still fixed to the wall with only 1 screw. This allows for the brackets to be rotated so that all brackets can be lined up before completing fixing with the 2 bottom screws on each bracket. SUGGESTION! Before fitting the 2 bottom screws offer up a length of handrail and seat it into the saddle of each bracket as an aid to making sure the alignment is correct before final fixing.

Fig 4



Step 5. Install lamp to lamp holder. SUGGESTION. Have power turned on when fitting lamps. The lamps are polarised. If the lamp does not work remove it, turn it 180 degress, and re-install. The lamp should now function. Once satisfied that the brackets are installed correctly and all lamps functioning, fit the clear plastic cover to the base of the bracket using the supplied M3 screws. Do not overtighten.

CONGRATULATIONS. YOU HAVE COMPLETED THE INSTALLATION OF YOUR LUMOS PRODUCT.

BELOW ARE A FEW HINTS TO HELP YOU ENJOY YOUR NEW INSTALLATION.

1. If you need to clean the brackets just use a soft cloth and warm water. Application of a good furniture polish or car wax can also help to avoid those annoying finger marks.
2. Please ensure that the clear lens cover is fitted. It is there to stop children being tempted to play with or remove the light. We have deliberately designed the system to run on 12VDC so there is no risk of any electrical hazard if children do remove a lamp. However do be aware that a missing lamp means a dark spot on the stairway and this can be a hazard if you are used to the stairs being illuminated.
3. The lighting system is very low power, is cold running, and has an expected lifespan of 100,000hrs. If desired the lighting may therefore be left permanently on without the worry of the brackets heating up, use of excessive power, or the lifespan of the lamps being shortened.
4. Your LUMOS brackets are very strong. We have had the brackets independently tested by Auckland University to the very rigid American ASTM standard. Failure of the bracket occurred at 900+ Kg. That is more than a small car weighs! And it is some 5 times the strength required by the ASTM standard.