Panhead Package

Window Size in Front of the IR Receiver Module

The window in front of the receiver should be sized in order to optimize the required viewing angle. A formula to calculate the optimal window size, given the required viewing angle, is presented below.

\[
a = 3.4 \text{ mm} + 2 \times d \times \tan\left(\frac{\Phi}{2}\right)
\]

**Example:**
Receiving angle should be ± 50°, distance between window and IR receiver is 5 mm. In that case the window size should be:
\[
a = 3.4 \text{ mm} + 2 \times 5 \text{ mm} \times 1.19 = 15.3 \text{ mm}
\]

If the window size must be small then a light guide may be helpful to span the distance between front panel and IR receiver. There is some loss of optical power at the connection between IR receiver and light guide.

We recommend a diameter of about 4 mm for the optimum efficiency of the light guide. The length should be at least twice the diameter in order to have a smooth directivity characteristic.