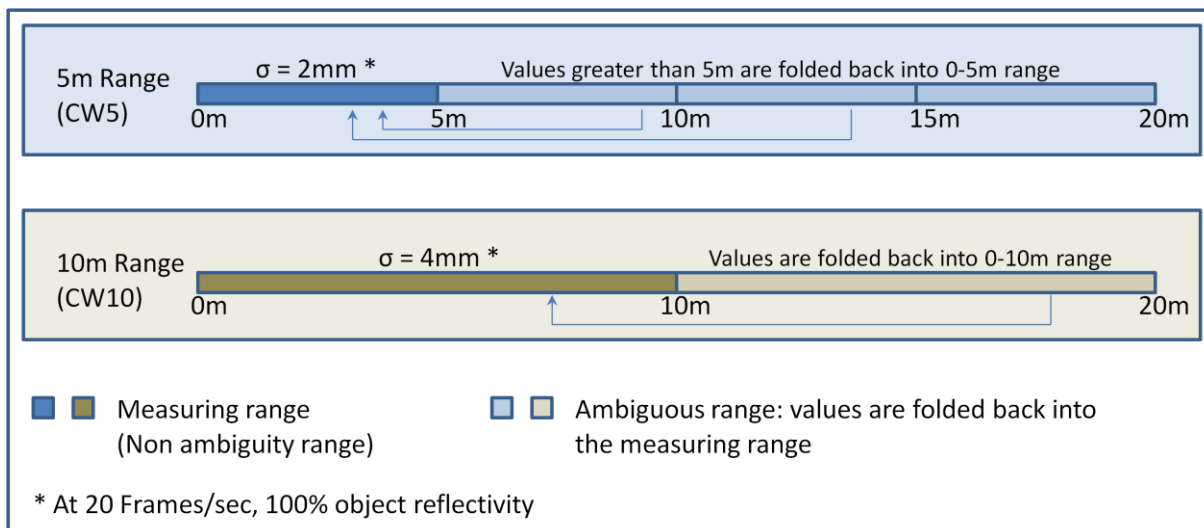


About the Measurement Range:

Measurements are subject to a so called “ambiguity” or a “back-folding” phenomenon that is due to the periodicity of the signal that is used for the distance measurement. The cameras can only measure without ambiguity objects that are situated into their “Non-ambiguity range” or “measurement range” (0-5m in the case of a CW5, 0-10m in the case of a CW10)

In the case of a camera with a measurement range of 5 meters (CW5), any object that is situated further than 5 meters and whose intensity is still high enough to be detected by the camera will be folded back into the “non ambiguity range “(e.g.: an object at 7 meters will be measured at 2 meters, one at 9m at 4m and one at 13 at 3 meters...).

Similarly, for a camera with a range of 10 meters (CW10), all detectable objects situated at 12m will be folded back at 2m, etc.



In the field, some applications are limited in range by the geometry of the environment (e.g. a wall in the background at less than 5m). In that case a CW5 camera will deliver reliable results, with no artifacts due to objects folded back onto the measurement range (same for scene with a limited range of 10 meters using a CW10).

When the background is not limited, the folding back of far and bright objects might cause problems. The solution is to filter those values out by setting an amplitude threshold (which requires the objects of the background to be significantly less reflective than measured objects in the front). This filtering works best using a CW10 camera, as practice has shown that most objects situated further than 10 meters have low intensities.