



## TECH NOTE

**Title:** MACRO AND YOUR i-SPEED 7  
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**Macro applications can be a challenge - choosing the correct lens and setup can be difficult.**

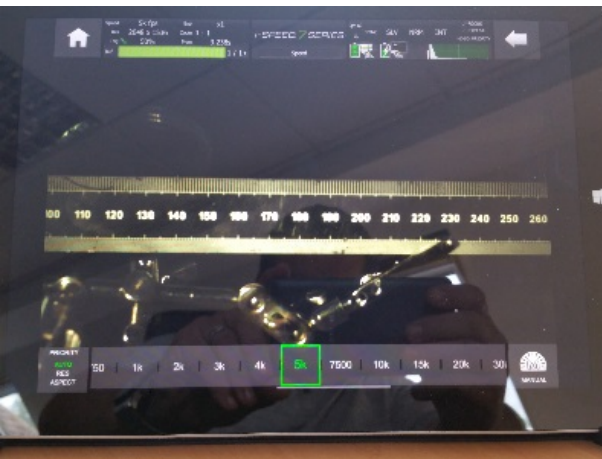
The following images give a guide as to what can be achieved. You may not have the same lens or extension tube but it gives you an idea of what is possible.

The 2 images on the below are a plan view of the lens and target with the resulting image achieved showing FOV (Field Of View).

50mm lens



280mm Lens to Object  
Minimum focal distance



165mm FOV

All of the following images are taken using the full 2048x1536 sensor resolution, if faster frame rates require the sensor to window to a smaller resolution then a simple calculation can be made for the new FOV.

E.g. 5000fps @ 2048x1536 = 56mm FOV. At 32,000fps @ 1064x768 =  $((1064 / 2048) \times 56\text{mm}) = 29\text{mm}$

### 105mm Macro lens



210mm Lens to Object  
Minimum focal distance



56mm FOV

### 105mm Macro lens with 35mm extension tube



140mm Lens to Object  
Minimum focal distance



30mm FOV

105mm Macro lens with 70mm extension tube



210mm Lens to Object  
Maximum focal distance



42mm FOV



105mm Lens to Object  
Minimum focal distance



21mm FOV

Navitar x12 lens



80mm Lens to Object



2mm FOV



30mm Lens to Object



1mm FOV