| Roman Space Telescope Imaging Capabilities | | | |
|---|---|---|---|
| **Telescope Aperture** (2.4 meter) | **Field of View** (45′x23′; 0.28 sq deg) | **Pixel Scale** (0.11 arcsec) | **Wavelength Range** (0.5-2.0 $\mu$m) |

| **Filters** | **R062** | **Z087** | **Y106** | **J129** | **H158** | **F184** | **W146** |
|---|---|---|---|---|---|---|---|
| Wavelength ($\mu$m) | 0.48-0.76 | 0.76-0.98 | 0.93-1.19 | 1.13-1.45 | 1.38-1.77 | 1.68-2.00 | 0.93-2.00 |
| Sensitivity (5σ AB mag in 1 hr) | 28.5 | 28.2 | 28.1 | 28.0 | 28.0 | 27.5 | 28.3 |

| Roman Space Telescope Spectroscopic Capabilities | | | | |
|---|---|---|---|---|
| | **Field of View (sq deg)** | **Wavelength ($\mu$m)** | **Resolution** | **Sensitivity (AB mag) (10σ per pixel in 1hr)** |
| Grism | 0.28 sq deg | 1.00-1.93 | 435-865 | 20.5 at 1.5 $\mu$m |
| Prism | 0.28 sq deg | 0.75-1.8 | 70-170 | 23.5 at 1.5 $\mu$m |

| Roman Space Telescope Coronagraphic Capabilities | | | | | |
|---|---|---|---|---|---|
| | **Wavelength ($\mu$m)** | **Inner Working Angle (arcsec)** | **Outer Working Angle (arcsec)** | **Detection Limit*** | **Spectral Resolution** |
| Imaging & Spectroscopy | 0.5-0.8 | 0.15 (exoplanets)<br>0.48 (disks) | 0.66 (exoplanets)<br>1.46 (disks) | $10^{-9}$ contrast (after post-processing) | ~50 |