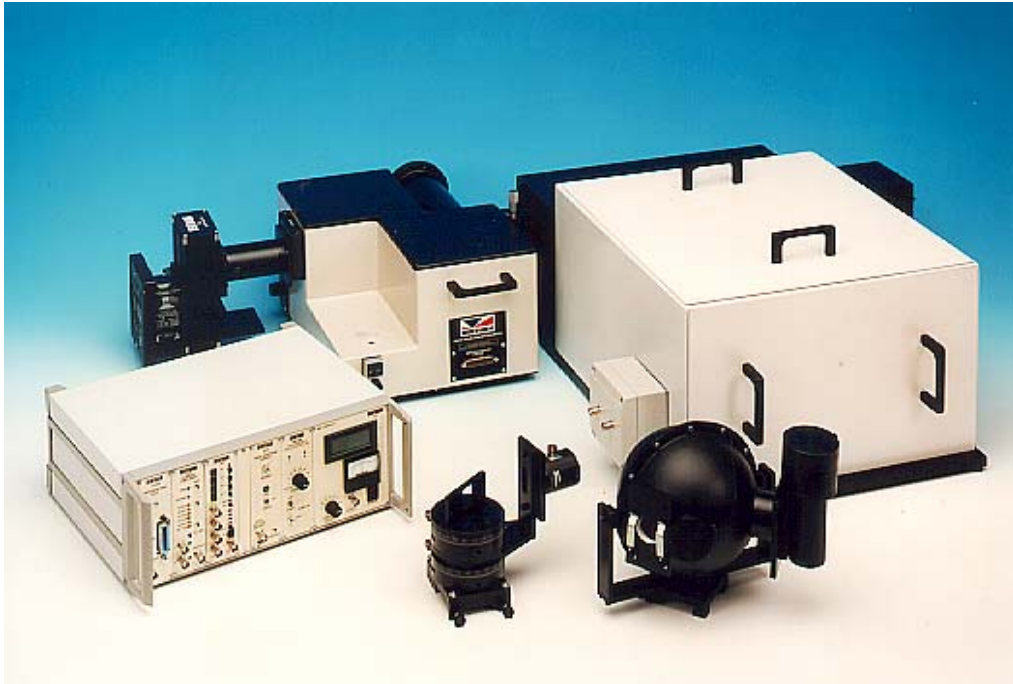


## Combined Spectroradiometer and Spectrophotometer System



Sometimes it can be beneficial to combine the requirements of a spectroradiometer and a spectrophotometer into a single system. This can be particularly true for specialist requirements such as UV or IR systems.

Above is shown a DMc150 double monochromator based system suitable for measurements over the wavelength range 180 - 1100nm. A fibre-coupled diffuser is employed for spectral irradiance measurements. Alternatively the UMS (universal measurement system) can be fitted with an integrating sphere for transmission measurements of scattering materials (i.e. lamp diffusers) or reflection of such samples. The UMS can also be fitted with a two axis goniometer for measuring specular reflectance at any angle (i.e. for reflector materials).

The fully automated, multiple grating TMc300 monochromator system shown below performs absolute and radiometric measurements over the wavelength range  $1\mu\text{m}$  to  $15\mu\text{m}$ . A gold-coated integrating sphere is used as the input optic for spectral irradiance measurements as well as inside the UMS for transmission/reflectance measurements. A lock-in amplifier based system is used in conjunction with a pyroelectric detector, peltier cooled PbS/PbSe detectors and liquid nitrogen cooled InSb and MCT offering a wide choice of wavelength range and sensitivities.

