

SECTION G — PHYSICS

G01 MEASURING; TESTING

G01J MEASUREMENT OF INTENSITY, VELOCITY, SPECTRAL CONTENT, POLARISATION, PHASE OR PULSE CHARACTERISTICS OF INFRA-RED, VISIBLE OR ULTRA-VIOLET LIGHT; COLORIMETRY; RADIATION PYROMETRY [2]

Note(s)

1. This subclass covers the detection of the presence or absence of infra-red, visible, or ultra-violet light, not otherwise provided for.
2. Attention is drawn to the Notes following the title of class G01.

Subclass index

PHOTOMETRY; PYROMETRY.....1/00, 5/00
 SPECTROMETRY; MEASURING: POLARISATION; VELOCITY; PHASE; PULSES.....3/00, 4/00, 7/00, 9/00, 11/00

1/00	Photometry, e.g. photographic exposure meter (spectrophotometry G01J 3/00; specially adapted for radiation pyrometry G01J 5/00)	1/42	• using electric radiation detectors (optical or mechanical part G01J 1/04; by comparison with a reference light or electric value G01J 1/10)
1/02	• Details	1/44	• • Electric circuits
1/04	• • Optical or mechanical part	1/46	• • • using a capacitor
1/06	• • • Restricting the angle of incident light	1/48	• using chemical effects
1/08	• • Arrangements of light sources specially adapted for photometry	1/50	• • using change in colour of an indicator, e.g. actinometer
1/10	• by comparison with reference light or electric value	1/52	• • using photographic effects
1/12	• • using wholly visual means (G01J 1/20 takes precedence)	1/54	• • by observing photo-reactions between gases
1/14	• • • using comparison with a surface of graded brightness	1/56	• using radiation pressure or radiometer effect
1/16	• • using electric radiation detectors (G01J 1/20 takes precedence)	1/58	• using luminescence generated by light
1/18	• • • using comparison with a reference electric value	1/60	• by measuring the pupil of the eye
1/20	• • intensity of the measured or reference value being varied to equalise their effects at the detector, e.g. by varying incidence angle	3/00	Spectrometry; Spectrophotometry; Monochromators; Measuring colours [4]
1/22	• • • using a variable element in the light-path, e.g. filter, polarising means (G01J 1/34 takes precedence)	3/02	• Details
1/24	• • • • using electric radiation detectors	3/04	• • Slit arrangements
1/26	• • • • adapted for automatic variation of the measured or reference value	3/06	• • Scanning arrangements
1/28	• • • using variation of intensity or distance of source (G01J 1/34 takes precedence)	3/08	• • Beam-switching arrangements
1/30	• • • • using electric radiation detectors	3/10	• • Arrangements of light sources specially adapted for spectrometry or colorimetry
1/32	• • • • adapted for automatic variation of the measured or reference value	3/12	• Generating the spectrum; Monochromators
1/34	• • • using separate light-paths used alternately or sequentially, e.g. flicker	3/14	• • using refracting elements, e.g. prism (G01J 3/18, G01J 3/26 take precedence)
1/36	• • • • using electric radiation detectors	3/16	• • • with autocollimation
1/38	• using wholly visual means (G01J 1/10 takes precedence)	3/18	• • using diffraction elements, e.g. grating
1/40	• • using limit of visibility or extinction effect	3/20	• • • Rowland circle spectrometers
		3/22	• • • Littrow mirror spectrometers
		3/24	• • • using gratings profiled to favour a specific order
		3/26	• • using multiple reflection, e.g. Fabry-Perot interferometer, variable interference filter
		3/28	• Investigating the spectrum (using colour filters G01J 3/51) [4]
		3/30	• • Measuring the intensity of spectral lines directly on the spectrum itself (G01J 3/42, G01J 3/44 take precedence)

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- 3/32 • • • Investigating bands of a spectrum in sequence by a single detector
- 3/36 • • • Investigating two or more bands of a spectrum by separate detectors
- 3/40 • • Measuring the intensity of spectral lines by determining density of a photograph of the spectrum; Spectrography (G01J 3/42, G01J 3/44 take precedence) [4]
- 3/42 • • Absorption spectrometry; Double-beam spectrometry; Flicker spectrometry; Reflection spectrometry (beam-switching arrangements G01J 3/08) [4]
- 3/427 • • • Dual wavelength spectrometry [4]
- 3/433 • • • Modulation spectrometry; Derivative spectrometry [4]
- 3/44 • • Raman spectrometry; Scattering spectrometry [4]
- 3/443 • • Emission spectrometry [4]
- 3/447 • • Polarisation spectrometry [4]
- 3/45 • • Interferometric spectrometry [4]
- 3/453 • • • by correlation of the amplitudes [4]
- 3/457 • • Correlation spectrometry, e.g. of the intensity (G01J 3/453 takes precedence) [4]
- 3/46 • • Measurement of colour; Colour measuring devices, e.g. colorimeters (measuring colour temperature G01J 5/60) [4]
- 3/50 • • using electric radiation detectors [4]
- 3/51 • • • using colour filters [4]
- 3/52 • • using colour charts
- 4/00 Measuring polarisation of light [2]**
- 4/02 • • Polarimeters of separated-field type; Polarimeters of half-shadow type [2]
- 4/04 • • Polarimeters using electric detection means (G01J 4/02 takes precedence) [2]
- 5/00 Radiation pyrometry**
- 5/02 • • Details
- 5/04 • • Casings
- 5/06 • • Arrangements for eliminating effects of disturbing radiation
- 5/08 • • Optical features
- 5/10 • • using electric radiation detectors
- 5/12 • • using thermoelectric elements, e.g. thermocouples
- 5/14 • • • Electrical features
- 5/16 • • • Arrangements with respect to the cold junction; Compensating influence of ambient temperature or other variables
- 5/18 • • • • Special adaptation for indicating or recording
- 5/20 • • using resistors, thermistors, or semiconductors sensitive to radiation
- 5/22 • • • Electrical features
- 5/24 • • • • Use of a specially-adapted circuit, e.g. bridge circuit
- 5/26 • • • • Special adaptation for indicating or recording
- 5/28 • • using photo-emissive, photo-conductive, or photo-voltaic cells
- 5/30 • • • Electrical features
- 5/32 • • • • Special adaptation for indicating or recording
- 5/34 • • using capacitors
- 5/36 • • using ionisation of gases
- 5/38 • • using extension or expansion of solids or fluids
- 5/40 • • using bimetallic elements
- 5/42 • • using Golay cells
- 5/44 • • using change of resonant frequency, e.g. of piezo-electric crystal
- 5/46 • • using radiation pressure or radiometer effect
- 5/48 • • using wholly visual means
- 5/50 • • using techniques specified in the subgroups below
- 5/52 • • using comparison with reference sources, e.g. disappearing-filament pyrometer
- 5/54 • • • Optical features
- 5/56 • • • Electrical features
- 5/58 • • using absorption; using polarisation; using extinction effect
- 5/60 • • using determination of colour temperature
- 5/62 • • using means for chopping the light
- 7/00 Measuring velocity of light**
- 9/00 Measuring optical phase difference; Determining degree of coherence; Measuring optical wavelength (spectrometry G01J 3/00) [3]**
- 9/02 • • by interferometric methods [3]
- 9/04 • • by beating two waves of the same source but of different frequency and measuring the phase shift of the lower frequency obtained [3]
- 11/00 Measuring the characteristics of individual optical pulses or of optical pulse trains [5]**