

HOLLOW CATHODE LAMPS

Analysis

Environment

Hollow cathode lamps are metal-vapor discharge lamps developed for atomic absorption analysis. This analysis requires a special lamp for each element to be measured. Hamamatsu provides 66 types of single element hollow cathode lamps including silver, aluminum and arsenic, and 7 types of multi-element lamps such as Na-K and Ca-Mg. Lamp configurations are available in 38 mm diameter types (L233, L733 series). Also available are the L 2433 series giant-pulse hollow cathode lamps (38 mm diameter) designed for AA spectroscopy using the S-H method background correction.



TL50F0133

Multi-Element Lamps: L733 Series (38mm dia.)

Elements	Element Name	Type No. (suffix)
Na-K	Sodium Potassium	-201NB
Ca-Mg	Calcium Magnesium	-202NU
Si-Al	Silicon Aluminum	-203NU
Fe-Ni	Iron Nickel	-204NQ
Sr-Ba	Strontium Barium	-205NB
Al-Ca-Mg	Aluminum Calcium Magnesium	-321NU
Ca-Mg-Zn	Calcium Magnesium Zinc	-322NQ

*: Analysis line varies according to the wavelength of each single element.

Single-Element Lamps: L233 Series (38mm dia.), L2433 Series (for S-H background correction)

Elements	Type No. (suffix)	Analysis Lines (nm)
* Ag Silver	-47NB	328.07 * 338.28
* Al Aluminum	-13NB	309.27 * 396.15
* As Arsenic	-33NQ	193.70 * 197.20
* Au Gold	-79NQ	242.80 * 267.59
* B Boron	-5NQ	249.68 * 249.77
* Ba Barium	-56NB	553.55 *
* Be Beryllium	-4NQ	234.86 *
* Bi Bismuth	-83NQ	223.06 * 306.77
* Ca Calcium	-20NU	422.67 *
* Cd Cadmium	-48NQ	228.80 *
* Co Cobalt	-27NU	240.73 * 346.58
* Cr Chromium	-24NB	357.87 * 425.44
Cs Cesium	-55NB	852.11 *
* Cu Copper	-29NB	324.75 * 327.40
* Dy Dysprosium	-66NB	404.59 * 421.17
* Er Erbium	-68NB	400.79 * 415.11
* Eu Europium	-63NB	459.40 * 462.72
* Fe Iron	■ -26NU	248.33 * 371.99
* Ga Gallium	-31NU	287.42 * 294.36 *
Gd Gadolinium	-64NB	407.87 * 422.58 *
* Ge Germanium	-32NU	265.16 *
* Hf Hafnium	-72NU	286.64 * 307.29

Elements	Type No. (suffix)	Analysis Lines (nm)
Hg Mercury	-80NU	253.65 *
* Ho Holmium	-67NB	410.38 * 416.30
In Indium	-49NB	303.94 * 325.61
Ir Iridium	-77NQ	208.88 * 266.47
* K Potassium	-19NB	766.49 * 769.90
* La Lanthanum	-57NB	357.44 * 550.13 *
* Li Lithium	-3NB	610.36 * 670.78 *
Lu Lutetium	-71NB	328.17 * 331.21 *
* Mg Magnesium	-12NU	285.21 *
* Mn Manganese	-25NU	279.48 * 403.08 *
* Mo Molybdenum	-42NB	313.26 * 320.88
* Na Sodium	-11NB	589.00 * 589.59
Nb Niobium	-41NB	334.91 * 405.89
Nd Neodymium	-60NB	463.42 * 492.45 *
* Ni Nickel	-28NQ	232.00 * 341.48
Os Osmium	-76NU	290.90 * 305.86
* Pb Lead	-82NQ	217.00 * 283.30
* Pd Palladium	-46NQ	244.79 * 247.64
Pr Praseodymium	-59NB	495.13 * 513.34
* Pt Platinum	-78NU	265.95 * 299.80
Rb Rubidium	-37NB	780.02 * 794.76
Re Rhenium	-75NB	346.05 * 346.47

Elements	Type No. (suffix)	Analysis Lines (nm)
Rh Rhodium	-45NB	343.49 *
* Ru Ruthenium	-44NB	349.89 *
* Sb Antimony	-51NQ	217.58 * 231.15
Sc Scandium	-21NB	390.74 * 391.18 *
* Se Selenium	-34NQ	196.03 *
* Si Silicon	-14NU	251.61 * 288.16
* Sm Samarium	-62NB	429.67 * 484.17
* Sn Tin	-50NQ	224.61 * 286.33
* Sr Strontium	-38NB	460.73 *
Ta Tantalum	-73NU	271.47 * 275.83
Tb Terbium	-65NB	431.88 * 432.64 *
* Te Tellurium	-52NQ	214.27 *
* Ti Titanium	-22NB	364.27 * 365.35
Tl Thallium	-81NU	276.78 * 377.57
Tm Thulium	-69NB	371.79 * 410.58
* V Vanadium	-23NB	306.64 * 318.40 *
W Tungsten	-74NU	255.14 * 400.87
* Y Yttrium	-39NB	410.23 * 412.83
* Yb Ytterbium	-70NB	346.43 * 398.79 *
* Zn Zinc	-30NQ	213.86 * 307.59
Zr Zirconium	-40NB	360.12 * 468.78
D ₂ Deuterium	-1DQ	240.00 (peek)

: "" mark indicates the maximum absorption wavelength.
 "●" mark indicates L2433 series element.

"■" mark indicates that the final suffix will be "NQ" instead of "NU" in the case of the L2433 series.