

Hollow Cathode Lamps

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 38mm diameter types (L233,L733 series). Also available are the L 2433 series giant-pulse hollow cathode lamps (38mm 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	■ -202NQ
Si-Al	Silicon Aluminum	■ -203NQ
Fe-Ni	Iron Nickel	-204NQ
Sr-Ba	Strontium Barium	-205NB
Al-Ca-Mg	Aluminum Calcium	■ -321NQ
Ca-Mg-Zn	Calcium Magnesium Zinc	-322NQ

*: Analysis line varies according to the wavelength of each single element.
 "■" mark indicates that the final suffix will be "NU" instead of "NQ" in the case of the L733 series.

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

at 25°C

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
D2 Deuterium	-1DQ	240.00 (peak)

"*" mark indicates the maximum absorption wavelength.

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

"⊙" mark indicates L2433 series element.