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PHOTON IS OUR BUSINESS

VM05-2024-01

HAMAMATSU Virtual Patent Marking – June 20, 2025

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Items listed below may be sold individually or as part of a combination product.

qCMOS™ Camera

Patented Products	Associated Patent Number(s)
ORCA-Quest (C15550-20UP series)	US9,423,601 US10,142,566 US10,362,245 US10,602,087 US11,204,432 US11,215,717 US11,656,374 US11,835,667 US11,921,245
ORCA-Quest 2 (C15550-22UP series)	US9,423,601 US10,142,566 US10,362,245 US10,602,087 US11,204,432 US11,215,717 US11,656,374 US11,835,667 US11,921,245

CMOS Camera

Patented Products	Associated Patent Number(s)
ORCA-Fire (C16240-20UP series)	US9,423,601 US10,142,566 US10,362,245 US10,602,087
ORCA-Fusion BT (C15440-20UP series)	US9,423,601 US10,142,566 US10,362,245 US10,602,087
ORCA-Fusion (C14440-20UP series)	US9,423,601 US10,142,566 US10,362,245 US10,602,087
ORCA-Flash4.0 V3 (C13440-20CU series)	US9,423,601 US10,142,566 US10,362,245 US10,602,087 US9,995,920 US10,684,459
ORCA-Lightning (C14120-20P series)	US9,423,601 US10,142,566 US10,362,245 US10,602,087

X-ray TDI camera

Patented Products	Associated Patent Number(s)
C15400 Series	US8,723,129 US8,829,449 US9,279,890 US10,101,469 US10,746,884 US10,859,715

X-ray line scan camera

Patented Products	Associated Patent Number(s)
C8133 Series	US8,223,922 US8,280,005 US8,600,005 US8,964,939 US9,594,031 US10,393,676
C14300 Series	US10,267,751
C11800 Series	US10,267,751
C14960 Series	US10,267,751
C15600 Series	US10,267,751

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Digital slide scanner

Patented Products	Associated Patent Number(s)
NanoZoomer S360	US7,602,996 US7,801,352 US7,978,898 US8,106,942 US8,107,770 US8,126,250 US8,422,127 US9,911,028 USD848,434 USD848,433 US10,422,987 USD866,555 USD886,830 USD892,811 USD893,505 USD897,351 US10,969,570 US11,022,621 US11,249,297 US11,280,991 US11,698,519
NanoZoomer S360MD	US7,602,996 US7,801,352 US7,978,898 US8,106,942 US8,107,770 US8,126,250 US8,422,127 US9,911,028 US10,422,987 USD866,555 USD886,830 USD892,811 USD893,505 USD897,351 US10,969,570 US11,249,297 US11,280,991 US11,698,519
NanoZoomer S210	US7,602,996 US7,801,352 US7,978,898 US8,106,942 US8,107,770 US8,126,250 US9,911,028 US10,422,987 US11,280,991 US11,698,519
NanoZoomer S60	US7,602,996 US7,801,352 US7,885,447 US7,978,898 US8,106,942 US8,107,770 US8,126,250 US9,911,028 US10,422,987 US11,280,991 US11,698,519
NanoZoomer S20	US7,602,996 US7,801,352 US7,978,898 US8,106,942 US8,107,770 US8,126,250 US8,422,127 US9,911,028 US10,422,987 US11,249,297 US11,280,991 US11,698,519
NanoZoomer-SQ	US7,602,996 US7,801,352 US7,978,898 US8,106,942 US8,107,770 US8,126,250 US8,422,127 US9,911,028

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	US10,088,659 US10,422,987 US11,280,991 US11,698,519
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Drug screening system

Patented Products	Associated Patent Number(s)
FDSS/ μ Cell	US10,180,525 US10,495,804
EFS pacing system	US9,778,189

Light-Sheet Microplate Cytometer

Patented Products	Associated Patent Number(s)
CYTOQUBE	US10,809,509 US11,169,092 US11,131,839 US11,391,934 US11,709,350 US11,852,792 USD1,015,566 USD1,010,154 USD1,015,567 US11,822,066

Luminescence efficiency measurement system

Patented Products	Associated Patent Number(s)
Absolute PL quantum yield spectrometer	US8,324,561 US8,462,337 US8,525,989 US8,587,779 US8,643,839 US9,423,339 US10,094,779 US10,209,189 US11,150,178
Quantaurs-QY	US8,462,337 US8,587,779 US8,592,780 US8,643,839 US8,916,836 US9,024,278 US9,423,339 US10,094,779 US11,150,178
Quantaurs-QY Plus UV-NIR	US8,462,337 US8,525,989 US8,587,779 US8,592,780 US8,643,839 US8,916,836 US9,024,278 US9,423,339 US9,952,101 US10,036,706 US10,094,779 US10,222,332 US10,928,246
ODPL measurement system	US10,816,402

Fluorescence lifetime/transient absorption analysis system

Patented Products	Associated Patent Number(s)
Quantaurs-Tau Fluorescence lifetime spectrometer	US10,962,932

Molecular orientation characteristic measurement system

Patented Products	Associated Patent Number(s)
Molecular orientation characteristic measurement system	US 11,243,073 US11,920,921

Micro LED inspection system

Patented Products	Associated Patent Number(s)
MiNY PL Micro LED PL inspection system	US11,694,324

Spectrometer

Patented Products	Associated Patent Number(s)
OPAL - Luxe High dynamic range spectrometer	US11,892,352 US11,828,653

Failure analysis system

Patented Products	Associated Patent Number(s)
PHEMOS Series	US11,402,200 US11,714,120
iPHEMOS Series	US11,402,200 US11,714,120
EO Probing unit	US9,099,350 US9,562,944 US9,588,175 US9,618,563 US10,060,975 US10,101,383 US10,139,447 US10,191,104 US10,330,615 US10,508,996 US10,591,427 US10,705,139 US11,047,792

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High power Incoherent Light source for EOP/EOFM	US9,099,350 US10,408,874
Laser marker unit	US10,312,166 US10,586,743 US10,607,900 US10,923,404
Laser scan system C10656 Series	US9,733,297
Laser scan system C14432 Series	US9,733,297 US9,557,377 US11,209,476
MOCI unit	US10,139,370 US10,564,126 US10,656,187 US10,698,006 US10,976,284 US11,009,531 US11,243,113 US11,733,091
Semishop failure analysis software	US7,752,594 US9,536,300 US9,734,571 US10,371,746 US11,009,531
SIL cap	US7,414,800 US7,423,816 US8,094,389 US8,582,202 US10,545,309 US10,558,010 US11,256,079 US11,913,888 US11,841,393
Thermal lock-in unit	US9,575,020 US9,658,116 US10,365,324 US10,371,746
Mirror Baffle	US9,411,143 US10,663,709, US10,048,483
OBIRCH Analysis	US11,573,251 US11,927,626

Photomultiplier tubes (PMTs)

Patented Products	Associated Patent Number(s)
Head-on type	US9,293,308 US9,437,406 US11,302,522 US11,688,592 US11,955,325
Photomultiplier tube assemblies	US9,293,308 US9,437,406 US9,607,814 US11,688,592 US9,607,814

Terahertz (THz) sensors

Patented Products	Associated Patent Number(s)
THz PMT	US11,776,798 US12,261,010
THz PMT module	US11,776,798 US12,261,010

Electron & ion sensors

Patented Products	Associated Patent Number(s)
Electron multipliers (EMs)	US9,514,920 US9,892,892 US10,037,871 US10,522,334 US10,629,418 US10,818,484 US11,011,358 US11,417,505 US11,640,902
CERARION	US9,514,920 US9,892,892 US10,037,871 US10,522,334 US10,629,418 US10,818,484 US11,011,358 US11,417,505
Microchannel plates (MCPs)	US8,508,110 US9,064,677 US9,117,640 US9,543,129 US9,934,952 US10,312,068 US10,818,484 US11,011,358 US11,139,153 US11,170,983 US11,315,772

Ionization-Assisting Substrates

Patented Products	Associated Patent Number(s)
Transfer Plate	US11,251,032 US11,735,406

Laser-Driven Light Sources (LDLS)

Patented Products	Associated Patent Number(s)
EQ series	US11,367,989 US11,664,211 US11,670,497 US11,676,809 US11,682,548 US11,862,922 US11,972,931

Excimer lamp light sources

Patented Products	Associated Patent Number(s)
EX-PEN	US11,508,568

Lamps

Patented Products	Associated Patent Number(s)
Xenon flash lamps	US8,304,973 US9,704,702 US10,514,142

UV-LED light sources

Patented Products	Associated Patent Number(s)
LIGHTNINGCURE LC-L5G: Linear irradiation type UV-LED units	US10,865,971 US11,298,959 US11,353,207 US11,806,687 US11,959,624

Microfocus X-ray sources

Patented Products	Associated Patent Number(s)
Open type	US9,449,779 US10,923,307 US11,101,098 US11,145,481 US11,164,713 US11,183,356
Sealed type	USD882,091 USD913,940 US10,825,638 US10,825,640 US10,825,641 US10,910,191 US10,943,759 US11,004,646 US11,039,526 US11,129,264 US11,147,148 US11,166,360 US11,721,515 US11,728,121 US11,875,965

X-Ray sensors

Patented Products	Associated Patent Number(s)
Scintillator Plates	US10,061,035 US10,261,198 US10,379,229 US10,514,470 US10,571,581 US10,983,224 US11,092,699 US11,099,283 US11,275,184 US11,480,694 US11,506,799 US11,536,859 US11,598,889 US11,644,581 US11,762,110 US11,953,631