

# The Passive Revolution

FrigoDynamics® Passive 2-Phase HX Solutions  
for Optogan CoB Light Engines



zero noise level

no lifetime issues

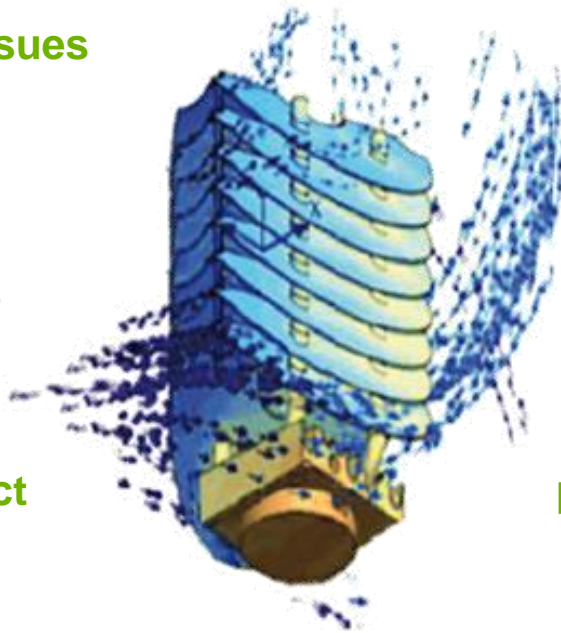
no CO<sub>2</sub> emissions

cools all  
lumen values

lighter than other  
passive solutions

compact

performs in all  
orientations



passive convection  
natural airflow



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# FrigoDynamics® Passive 2-Phase HX Solutions for Optogan Light Engines



## Der SC 2-Phasen Wärmetauscher

besteht durch ein besonderes, patentiertes Design, nützt den Kamineffekt aus und maximiert dadurch die Kühlleistung. Die kompakte Auslegung ist ideal für Track/Spot Light Applikationen. Die Lösung arbeitet in alle Richtungen.

## The SC 2-Phase HX

has a unique, patented design utilizing the chimney effect, thus maximizing cooling performance. The compact shape allows it to fit in typical cylindrical track/spot light type applications. Performs in any orientation.

## Échangeur de chaleur pour le 2-phase SC

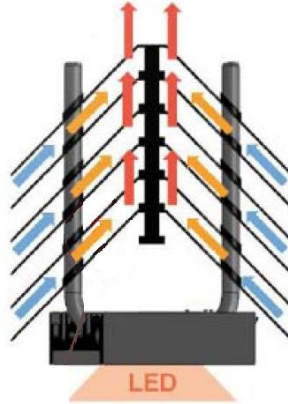
une conception spéciale, brevetée, bénéficieront de l'effet de cheminée et cela maximise la performance de refroidissement. Le design compact est idéal pour les applications légères de piste/spot. La solution fonctionne dans toutes les directions.

## El SC Intercambiador de calor por cambio de fase

tiene un diseño único y patentado utilizando el efecto chimenea, lo que maximiza la refrigeración de rendimiento. La forma compacta permite encajar en pista/spot cilíndrica en aplicaciones típicas de luminarias. Funciona en cualquier dirección.

## Lo scambiatore di calore SC 2 fasi

un design speciale, brevettato, potranno beneficiare l'effetto camino e questo massimizza le prestazioni di raffreddamento. Il design compatto è ideale per applicazioni leggera traccia/spot. La soluzione funziona in tutte le direzioni.



The only high power cooling solution that really works much longer than the product it cools.

| FrigoDynamics®<br>thermal solutions | 2-Phase HX |                |         | SC HPK-Fin™ 150 | SC HPK-Fin™ 180 | SC HPK-Fin™ 230 |             |      |      |             |      |      |
|-------------------------------------|------------|----------------|---------|-----------------|-----------------|-----------------|-------------|------|------|-------------|------|------|
|                                     | Dimensions |                |         | Ø100 H ~150     |                 |                 | Ø100 H ~180 |      |      | Ø100 H ~230 |      |      |
| T junction                          | < 110°C    | < 125°C        | < 150°C | T ambient ->    |                 |                 |             |      |      |             |      |      |
|                                     | 25°C       | 35°C           | 40°C    | 25°C            | 35°C            | 40°C            | 25°C        | 35°C | 40°C | 25°C        | 35°C | 40°C |
| OCM-X024R01A - 2050lm - 25W         | CoB        | R j-c 0,50 C/W |         |                 |                 |                 |             |      |      |             |      |      |
| OCM-X050R01A - 4100lm - 50W         | CoB        | R j-c 0,20 C/W |         |                 |                 |                 |             |      |      |             |      |      |
| OCM-X120R01A - 11.250lm - 120W      | CoB        | R j-c 0,15 C/W |         |                 |                 |                 |             |      |      |             |      |      |
| OCC-X040S2BA - 4.400lm - 40W        | X10        | R j-c 0,38 C/W |         |                 |                 |                 |             |      |      |             |      |      |
| OCC-X050R5AA - 5.500lm - 50W        | X10        | R j-c 0,30 C/W |         |                 |                 |                 |             |      |      |             |      |      |
| OCC-X100R2EA - 11.000lm - 100W      | X10        | R j-c 0,15 C/W |         |                 |                 |                 |             |      |      |             |      |      |

Please [contact](#) us, should you have special requirements you do not see covered here.

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# FrigoDynamics® Passive 2-Phase HX Solutions for Optogan Light Engines



## Der OC/LC 2-Phase Wärmetauscher

überzeugt durch sein flaches, patentiertes Design und eignet sich dadurch besonders für den Einsatz in abgehängten Decken, wenn der Einbauraum in der Vertikalen limitiert ist.

## The OC/LC 2-Phase HX

the patented design gives it a low profile ideal for fitting in spaces that have limited height available. The shape allows it to fit in typical recess downlight type applications.

## L'échangeur de chaleur de la phase 2 OC/LC

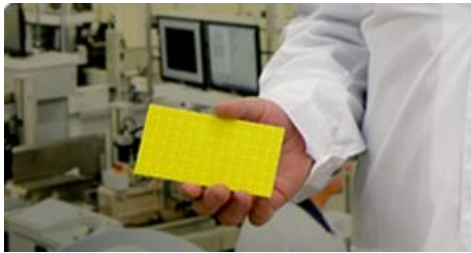
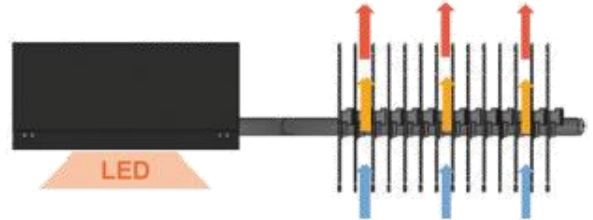
avec ses plats, brevetés design et est donc idéal pour une utilisation dans les plafonds suspendus, si peu d'espace de l'installation à la verticale.

## El OC/LC Intercambiador de calor por cambio de fase

El diseño patentado da un bajo perfil ideal para encajar en espacios que tienen altura limitada, por tanto es ideal para su uso en los falsos techos para los downlight.

## Lo scambiatore di calore OC/LC 2 fasi

con il suo piatto, design brevettato ed è quindi ideale per l'uso in soffitti sospesi, se limitato lo spazio di installazione in verticale



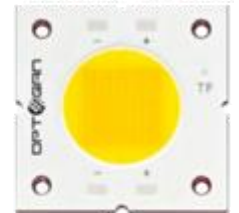
X10



X024



X050



X120



300g



370g



450g



LED SOLUTIONS

The only high power cooling solution that really works much longer than the product it cools.

| FrigoDynamics®<br>thermal solutions | 2-Phase HX |                |         | OC HPK-Fin™ 210 | OC HPK-Fin™ 250   |      |      | OC HPK-Fin™ 300   |      |      |                   |      |      |
|-------------------------------------|------------|----------------|---------|-----------------|-------------------|------|------|-------------------|------|------|-------------------|------|------|
|                                     | Dimensions |                |         |                 | H55 x W120 x L210 |      |      | H55 x W120 x L250 |      |      | H55 x W120 x L300 |      |      |
| T junction                          | < 110°C    | < 125°C        | < 150°C | T ambient ->    | 25°C              | 35°C | 40°C | 25°C              | 35°C | 40°C | 25°C              | 35°C | 40°C |
| OCM-X024R01A - 2050lm - 25W         | CoB        | R j-c 0,50 C/W |         |                 |                   |      |      |                   |      |      |                   |      |      |
| OCM-X050R01A - 4100lm - 50W         | CoB        | R j-c 0,20 C/W |         |                 |                   |      |      |                   |      |      |                   |      |      |
| OCM-X120R01A - 11.250lm - 120W      | CoB        | R j-c 0,15 C/W |         |                 |                   |      |      |                   |      |      |                   |      |      |
| OCC-X040S2BA - 4.400lm - 40W        | X10        | R j-c 0,38 C/W |         |                 |                   |      |      |                   |      |      |                   |      |      |
| OCC-X050R5AA - 5.500lm - 50W        | X10        | R j-c 0,30 C/W |         |                 |                   |      |      |                   |      |      |                   |      |      |
| OCC-X100R2EA - 11.000lm - 100W      | X10        | R j-c 0,15 C/W |         |                 |                   |      |      |                   |      |      |                   |      |      |

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# FrigoDynamics® Passive 2-Phase HX Solutions for Optogan X10 Light Engines



## Der HB 2-Phasen Wärmetauscher

besteht durch ein besonderes, patentiertes Design, nützt den Kamineffekt aus und maximiert dadurch die Kühlleistung. Die kompakte und sehr leichte Auslegung ist ideal für wirkliche High Power Applikationen. Die Lösung arbeitet in alle Richtungen.

## The SC 2-Phase HX

has a unique, patented design utilizing the chimney effect, thus maximizing cooling performance. The compact shape allows it to fit in typical cylindrical track/spot light type applications. Performs in any orientation.

## El SC Intercambiador de calor por cambio de fase

tiene un diseño único y patentado utilizando el efecto chimenea, lo que maximiza la refrigeración de rendimiento. La forma compacta permite encajar en pista/spot cilíndrica en aplicaciones típicas de luminarias. Funciona en cualquier dirección.



Courtesy of Optogan



Courtesy of Optogan

Spotlight on Optogan's X10 module



1410g



The only high power cooling solution that really works much longer than the product it cools.

|  | 2-Phase HX |         |         | HB HPK-Fin™ 360 |      |      |      |
|--|------------|---------|---------|-----------------|------|------|------|
|  | Dimensions |         |         | ø160 H ~270     |      |      |      |
| T junction                               | < 110°C    | < 125°C | < 150°C | T ambient ->    | 25°C | 35°C | 40°C |
| OCC-X010S01A - 5x5 (180W) 13500-18000lm  |            |         |         | R j-c 0,06 C/W  |      |      |      |
| OCC-X010S01A - 5x5 (200W) 15000-20000lm  |            |         |         | R j-c 0,06 C/W  |      |      |      |
| OCC-X010S01A - 5x6 (220W) 16500-22000lm  |            |         |         | R j-c 0,05 C/W  |      |      |      |
| OCC-X010S01A - 5x6 (240W) 18750-25000lm  |            |         |         | R j-c 0,05 C/W  |      |      |      |
| OCC-X010S01A - 5x10 (260W) 19500-26000lm |            |         |         | R j-c 0,03 C/W  |      |      |      |
| OCC-X010S01A - 5x10 (280W) 22500-30000lm |            |         |         | R j-c 0,03 C/W  |      |      |      |

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