

Sensing is life

amul OSRAM

Full year and fourth quarter results 2022

Alexander Everke, CEO
Ingo Bank, CFO
Moritz M. Gmeiner, Head of IR

February 2023

Vision and mission for ams OSRAM

To create the uncontested leader in optical solutions

Sensing



Illumination



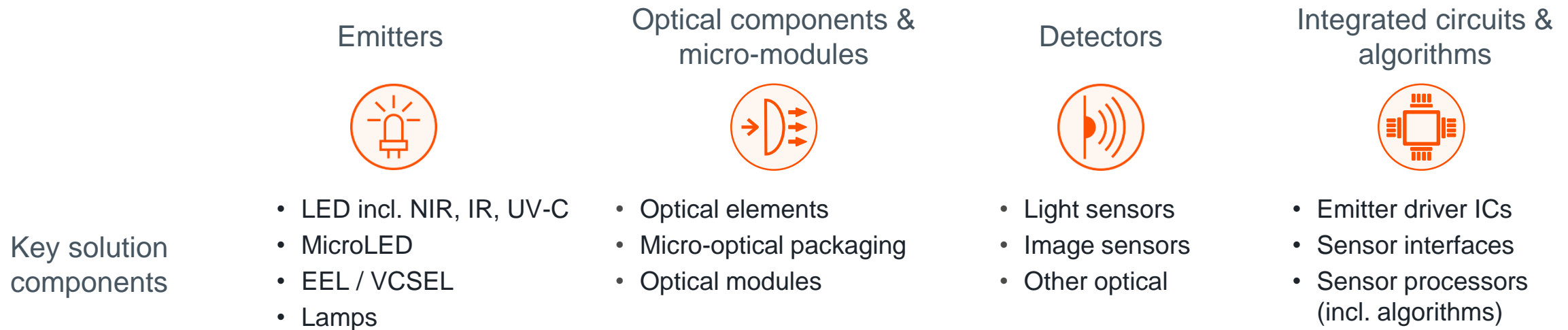
Visualization



Become the uncontested leader in optical solutions through bold investments in disruptive innovation and continuous transformation delivering best in class profitability and growth

Pursue market leadership in key optical segments

Building success from our focus technologies



Micro-optical solutions & lamps

Sensing



Illumination

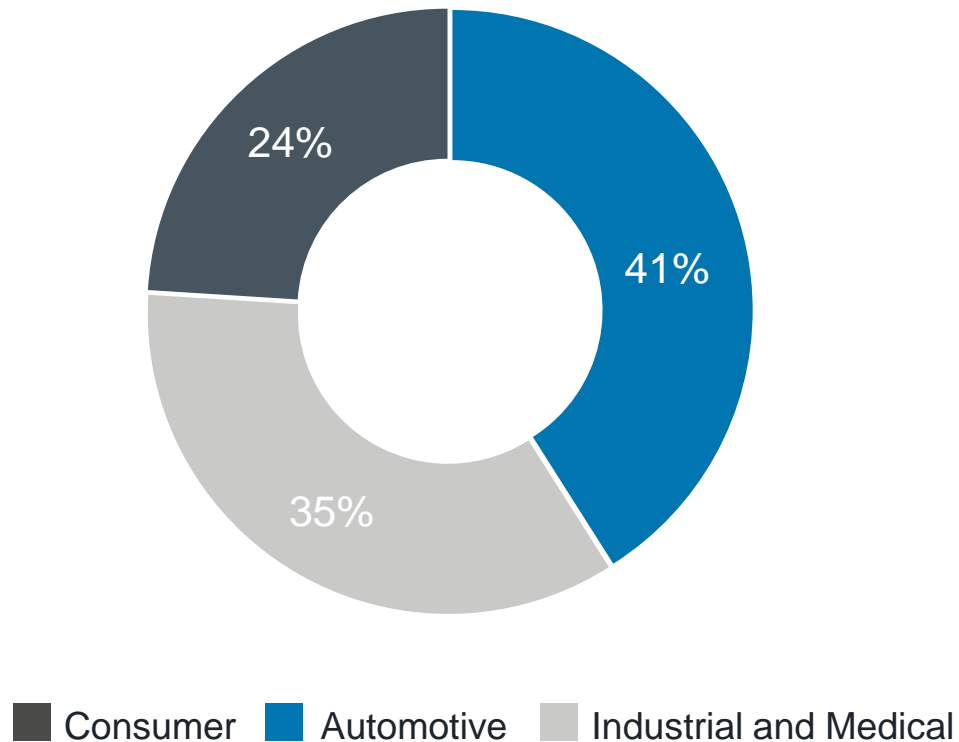


Visualization



Excellent position for leadership in optical solutions

Balanced revenue streams (FY 2022)



Industry-leading portfolio + application expertise

- Focus on leading technology positions
- Leader in application expertise across end markets
- Agility to support short and long product life cycles
- Able to drive innovation for different end markets, applications and customer bases
- Leveraging world-class IP and manufacturing

Leading technologies for key optical applications

- High performance automotive LED lighting (exterior + interior)
- LED innovation (UV-C, IRED, high power specialty lighting)
- Micro LED next generation display technology
- Display management, optical sensing
- Near-to-eye AR/VR illumination + sensing
- 3D AR/authentication (consumer + industrial)
- EEL/VCSEL ADAS (LIDAR)
- High performance imaging (industrial + medical)

Clear investor value proposition



Commitment to growth

Leader in optical solutions driven by secular growth trends in Automotive, Consumer and Industrial & Medical



Path to strong sustainable profitability

Doubling of EBIT margin driven by portfolio optimization, manufacturing footprint consolidation, synergy realization and revenue growth



Balanced and diversified business mix

Balanced application end-market exposure and diversified global customer base creates broadly supported earnings streams



Prudent financial policy

De-lever based on strong operational cash flows and proceeds from disposals, while maintaining investment for growth



Focus on long-term value generation

Re-invest in differentiating technology & innovation and related organic growth opportunities, in alignment with ESG focus

Our long-term targets

- Revenue CAGR >10%, outgrowing our SAM
- Synergies / savings ~350M€
- Adj. EBIT margin 20%+
- Automotive 35-40%, Consumer 35-40%, I&M 25-30%
- Top 10 global customers 35-40%
- Disposal proceeds >550M€
- Targeting investment grade with net debt/adj. EBITDA <2x
- Carbon neutrality in 2030
- Gender diversity in leadership 25% in 2026

2022: Key developments

ams OSRAM group business

Solid full year results in light of demanding market environment

- FY 2022 revenues EUR 4,819m, slightly up based on like-for-like portfolio comparison basis
- EBIT (adj.) EUR 407m (8.4% of revenues)
- Very solid operating cash flow of around EUR 600m

Automotive: solid performance amid imbalances and inventory adjustments

- Continued market + supply chain imbalances in H1
- Ongoing inventory adjustments driving negative volume effects through H2
- Legacy lighting with attractive performance
- Solid overall results, prudent inventory management

Consumer: mixed performance given diverging end market demand

- Global smartphone volumes impacted especially in China and Android segments
- Major end market segment contributed well, Android market muted due to lack of recovery
- Successful portfolio for different device types + broad customer base

Industrial & Medical: good overall results weakening towards year-end

- Strength in important industrial markets through largest part of year
- Demand deteriorated towards year-end in several markets reflecting negative macro-economic momentum
- Solid medical business through 2022

2022: Key developments

ams OSRAM group business

Improved balance sheet position, sound leverage situation

- Gross debt reduced by around EUR 400m in 2022
- Leverage 2.0x at year-end 2022 (net debt / adj. EBITDA)
- Solid long-term debt profile (next major maturity 2025) with EUR 1bn of undrawn committed lines

Planned portfolio re-alignment close to completion, integration progress on track

- Portfolio re-alignment nearly completed with all planned disposals signed
- Synergy and savings creation progressing to plan
- Integration programs in all areas fully on track through 2022

ESG progress

- First key ESG targets defined as part of group ESG strategy
- First combined sustainability report
- Achieved improved ESG ratings for combined group

2022: Strong progress in integration and portfolio re-alignment

Achievements in integration

- ✓ Synergy and savings run-rate of EUR 245m end of Q3 2022, 70% of expected total and fully in line with plans
- ✓ Fast implementation of portfolio re-alignment in more demanding market, clear focus on core technology areas
- ✓ Manufacturing footprint optimization/consolidation started, related indirect + direct labor productivity improved
- ✓ ERP integration mainly completed, first annual financials with aligned fiscal=calendar year
- ✓ Achieved targeted 2022 milestones across integration fields (organization, IT, systems, policies etc.)

Portfolio re-alignment near completion

- 5 disposals announced and/or closed in 2022
 - Fluence (horticulture systems business)
 - AMLS (retained ex-OSRAM-Continental JV business)
 - Digital Systems Eurasia (lighting modules/LED drivers)
 - Traxon (architectural lighting)
 - Clay Paky (entertainment lighting fixtures)
- Last planned disposal Clay Paky signed in Q4 2022
- Only two remaining closings (DS Eurasia, Clay Paky), expected in H1 2023
- Approx. EUR 950m p.a. total revenues sold (run-rate¹⁾) at low to negative overall operating profitability
- Expected total proceeds from disposal program increased to >EUR 550m (approx. EUR 465m already received)

Industry-first 8” LED front-end manufacturing facility, Malaysia

Significant prioritized investment to support long-term strategy

First mover in 8” manufacturing

- Industry-first 8” large-scale LED front-end facility
- High volume manufacturing to support growth plans
- Enabled for high power differentiated LED and leading smallest structure size microLED technologies
- High degree of production automation via state-of-the-art material handling and operating system
- ESG group goal support via energy generation and energy + water saving measures (large-scale green energy generation from facility + carpark roofs)

April 2022



Project progress in 2022

- Groundbreaking early 2022
- Construction of fab building and infrastructure through 2022
- Fab building and infrastructure nearing completion
- 2022 progress fully in line with plans despite demanding supply + cost situation for large building projects
- Further steps: equipment deliveries, hook-up + integration of equipment, setup + test of production lines, preparation for production availability

February 2023



ESG update: Climate strategy, first group sustainability report, carbon neutral goal

ams OSRAM group-wide ESG focus

ESG achievements 2022

- First group sustainability report published (GRI compliant)
 - CO₂ emissions reported for own activities (Scope 1 + 2) and partly along the value chain (Scope 3)
 - Group climate strategy defined, implementation started
 - Significant improvement in external ESG ratings
 - More detailed disclosure based on group data
 - Ongoing recognition by rating providers
 - High ranking overall as well as in sector
- S&P CSA: 72 (96th percentile), included in yearbook
Sustainalytics: “low medium risk”
ISS ESG: C

ESG goal: Carbon neutral by 2030

- Group to be carbon neutral (Scope 1 + 2) by 2030, endeavor towards net zero ambition
- 100% green electricity at production sites in Germany + Austria
- Started to self-generate electricity
 - First solar energy production 2022 at sites in Austria, China and Philippines
 - Large-scale solar energy production planned for new 8" manufacturing facility in Malaysia
- Strategy based on principle "avoid, reduce, compensate", reduction path developed
- Reducing emissions via energy efficiency measures at several locations, plan established to compensate for inevitable CO₂ emissions



Key societal megatrends drive demand for our optical solutions

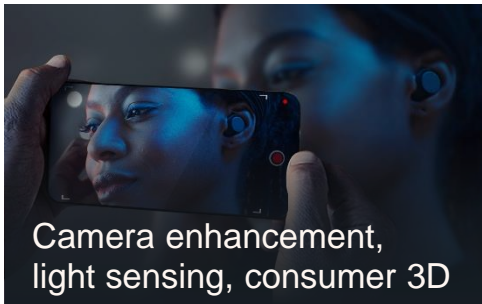
Consumer

Automotive

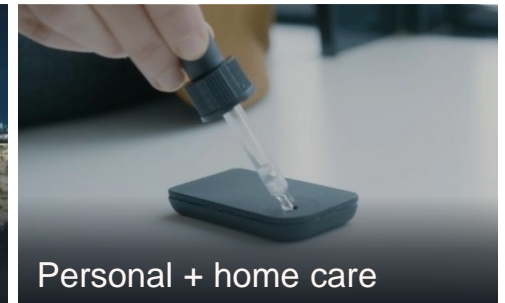
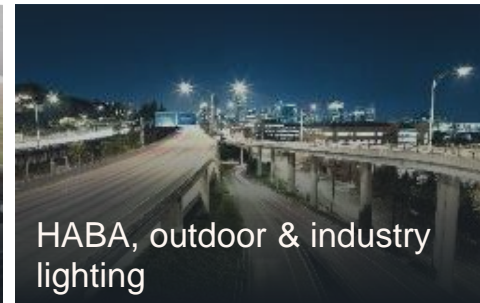
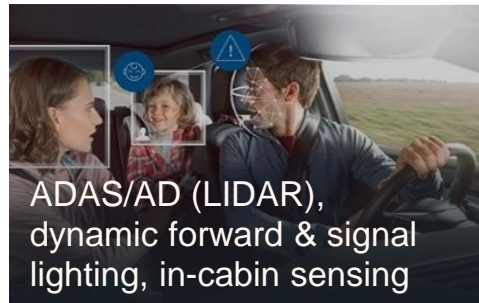
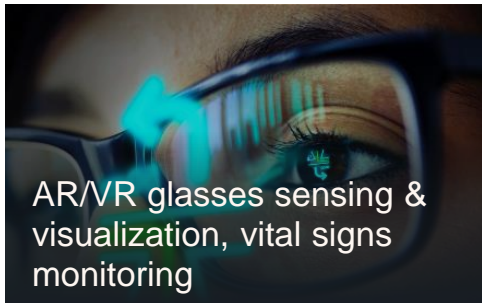
Industrial

Medical

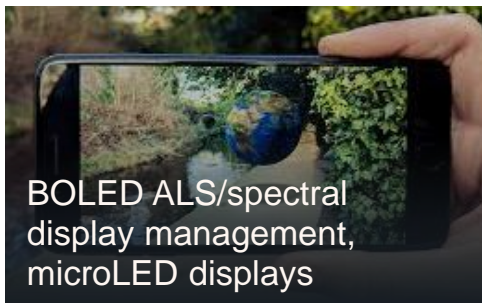
Digitalization



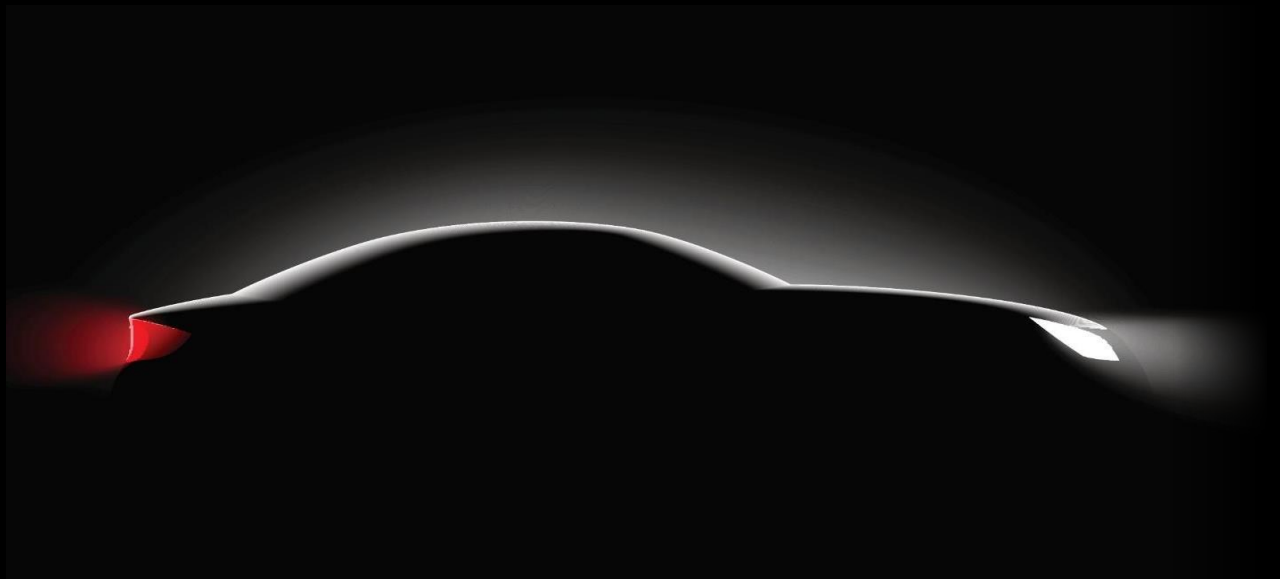
Smart Living (IoT)



Energy efficiency & sustainability



Broad offering for illumination, visualization and sensing applications



Illumination / Visualization

- Dynamic + static forward lighting
- Dynamic + static signaling
- Functional illumination + interior lighting
- Ambient lighting
- Projection
- Smart surface
- LCD backlighting

Sensing

- In cabin sensing
- Exterior sensing + ADAS
- Rain, light, and tunnel sensing
- Smart surface
- Ambient light sensing
- Position sensing

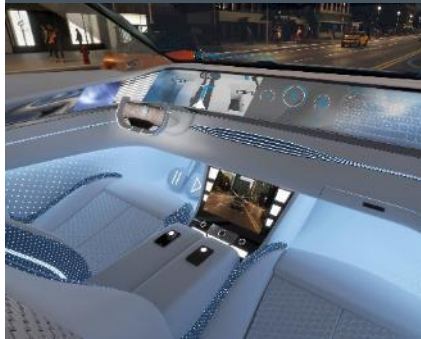
Enabling innovation in automotive mobility

Driving automotive application and technology trends

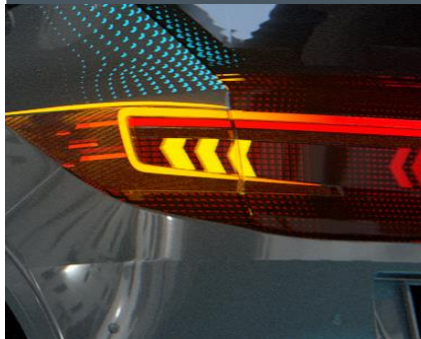
Exterior lighting



Interior lighting



Dynamic signaling



Driver + interior monitoring



Automated + autonomous driving



Gesture sensing + HMI



Automotive





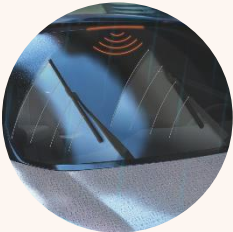
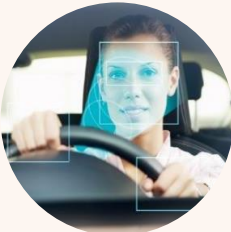


LED (low-mid-high power), matrix light, 2D/3D sensors, IRED, LIDAR (EEL/VCSEL), MicroLED, classic sources (Xenon, Halogen)

Leadership positions in automotive applications

Examples of market position in automotive applications¹



Overall #1 in automotive lighting

<p>Forward lighting</p>  <p>#1</p>	<p>Signaling</p>  <p>#1</p>	<p>Interior functional</p>  <p>#1</p>	<p>Interior ambient²</p>  <p>#2</p>
<p>Rain sensors</p>  <p>#1</p>	<p>In-cabin sensing</p>  <p>#1</p>	<p>Display backlighting</p>  <p>#2</p>	<p>LiDAR Emitters³</p>  <p>#1</p>

Innovative portfolio for smartphone, wearable, AR/VR and other devices



Sensing

- Camera enhancement
- Display management / BOLED sensing
- 2D/3D sensing (Augmented Reality, other)
- Vital Signs Monitoring
- Authentication
- Eye/hand/body tracking
- User interfacing

Illumination / Visualization

- MicroLED
- LED/laser projection (AR/VR glasses)

Enabling innovation in mobile + wearable devices

Creating solutions for consumer application and technology trends

Next generation microLED displays



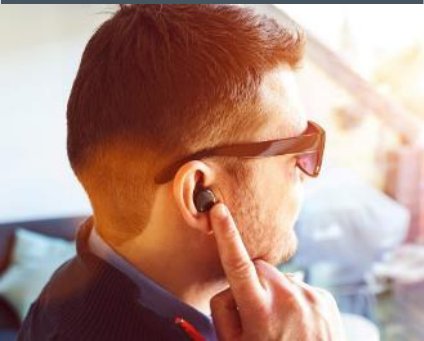
Camera enhancement



Display management



Presence detection



3D AR/VR + authentication



Near-to-Eye projection/sensing



Mobile + wearable

BOLED, microLED, LED, proximity + light sensing, color sensing, AWB, spectral sensing, 3D sensing, VCSEL/EEL, Near-to-Eye

Leadership position in consumer applications

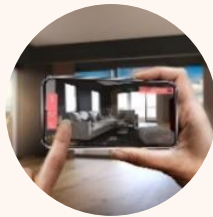
Examples of market position in consumer applications¹

Ambient light sensing



#1

Camera enhancements



#1

Wearable proximity & interaction



#1

Vital signs monitoring



#3

Near-to-eye projection



#1

Strong differentiation in industrial and medical applications



Illumination / Visualization

- Outdoor/industry lighting
- Horticulture & smart farming
- LED & laser projection
- UV-C LED disinfection

Sensing

- Industrial automation (IoT + robotics, imaging)
- Home & Building Automation (HABA)
- Medical imaging
- Vital signs monitoring

Enabling innovation in industrial + medical applications

Technologies for current and emerging industrial applications + innovative medical uses

Industrial lighting,
IoT + automation



Outdoor lighting,
HABA, security



Horticulture



Medical imaging



Vital signs
monitoring



UV-C disinfection



Industrial + Medical

IRED, LED, 3D/LIDAR, EEL/VCSEL,
UV-C, image sensing, spectral sen-
sing, NIR spectroscopy, digital X-ray,
CT sensing/photon counting, NanEye

Leadership position in industrial/medical applications

Examples of market position in industrial and medical applications¹



Highlights Q4 2022 & Outlook Q1 2023

Q4 2022

- Solid overall results fully in line with guidance range in difficult sector and market environment
- Semiconductors
 - Ongoing inventory adjustments in Automotive, solid performance
 - Consumer in line with muted expectations, unfavorable smartphone market
 - Increasingly negative demand trends in Industrial
- Lamps & Systems
 - Good automotive results including supportive aftermarket seasonal effects
 - Other areas reflecting end market trends
- Last planned disposal signed, nearing completion of disposal program
- Strong operating cash flow
- Healthy cash balance and solid leverage situation

Q1 2023

- Expected revenues EUR 900-1,000 million
- Expected operating profitability 4-7% (adj. EBIT margin)
- Reflecting ongoing market correction effects, lower expected production and shipment volumes, adverse exchange rate and deconsolidation effects
- EUR ~10m deconsolidation effects QoQ from closing of Traxon disposal

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Financial Results FY and Q4 2022

Full year and Q4 2022 key financials at a glance

Revenues

FY 2022	Q4 2022
4,819m EUR	1,177 EUR
-4.4% y-o-y	-2.9% q-o-q

Gross margin (adj.)

FY 2022	Q4 2022
30.5%	28.5%
1,470m EUR	336m EUR

EBIT margin (adj.)

FY 2022	Q4 2022
8.4%	7.3%
407m EUR	86m EUR

Net result (adj.)

FY 2022	Q4 2022
124m EUR	29m EUR
2.6%	2.5%

Operational Cash Flow

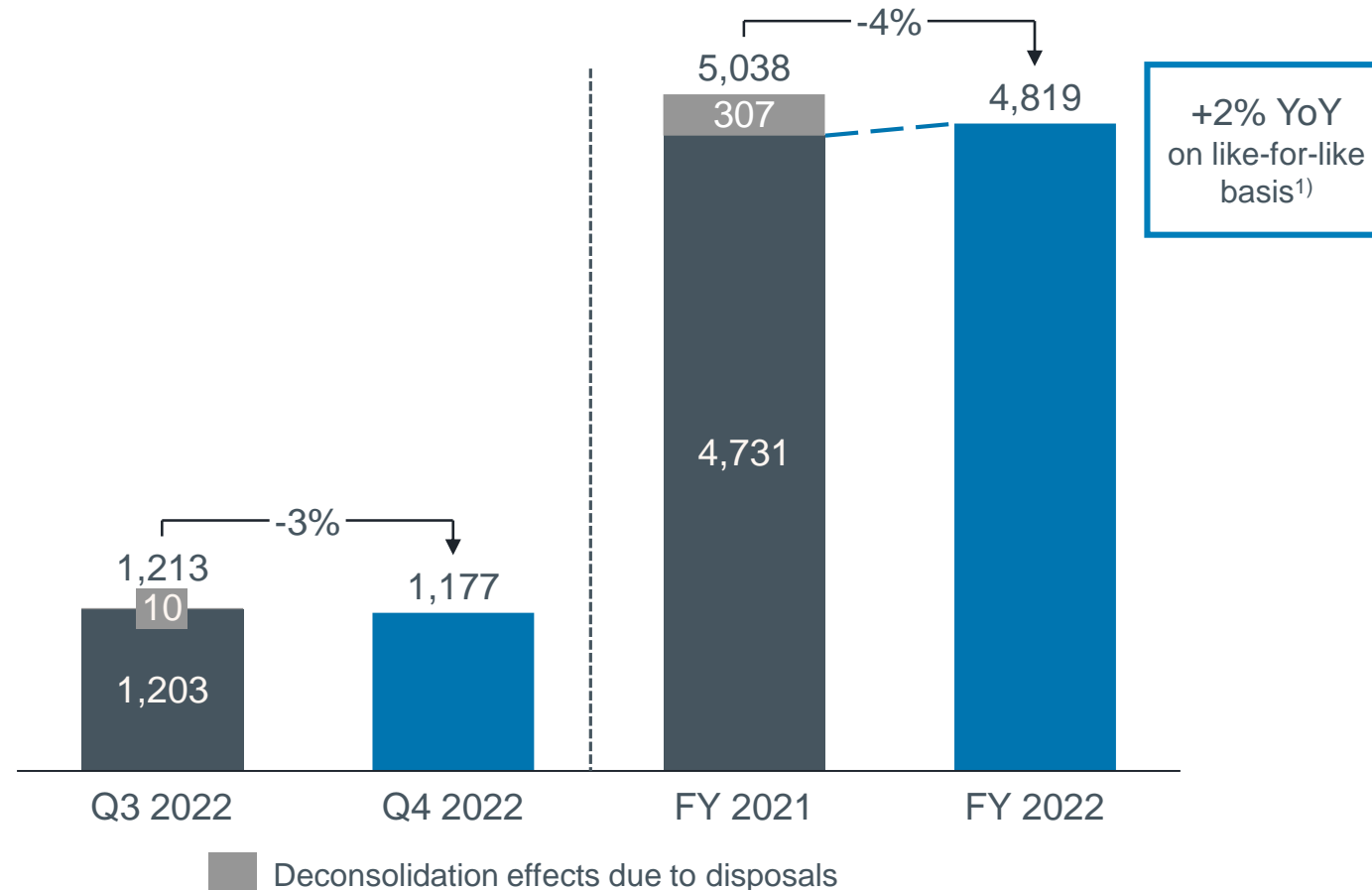
FY 2022	Q4 2022
599m EUR	201m EUR
12.4%	17.1%

Net debt

FY 2022
1,717m EUR
2.0x Leverage

Group revenues – Full year and Q4 2022

Total revenues



Comments

Q4 2022

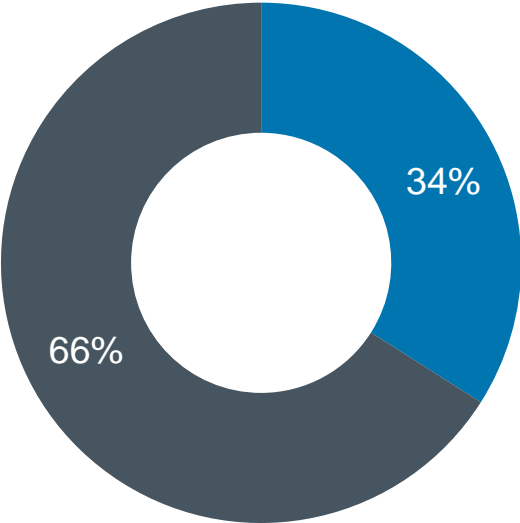
- Slight sequential decrease due to challenging market environment, fully in-line with guidance range

FY 2022

- Year-on-year growth on like-for-like portfolio comparison basis
- Year-on-year comparison reflects deconsolidation effects of around EUR 307m from several meaningful disposals including former OSRAM Continental JV business AMLS, Fluence horticulture fixtures business and others

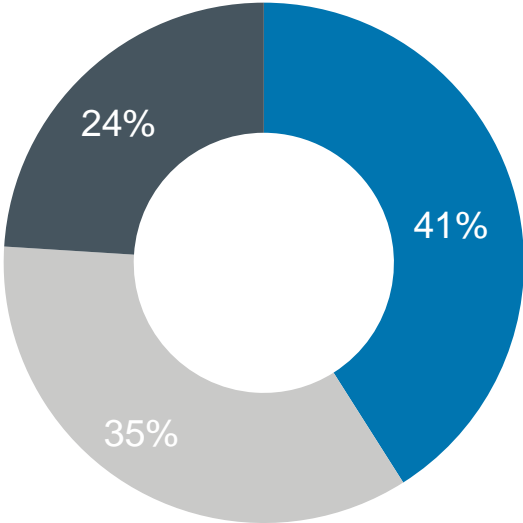
Balanced revenue distribution – Full year 2022

Revenues by segment



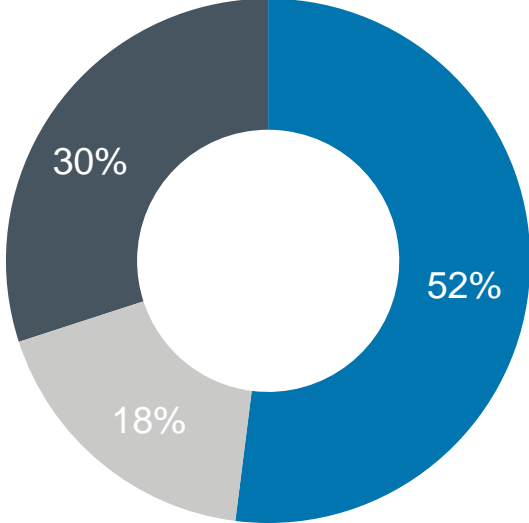
■ Semiconductors ■ Lamps & Systems

Revenues by end market



■ Automotive
■ Consumer
■ Industrial and Medical

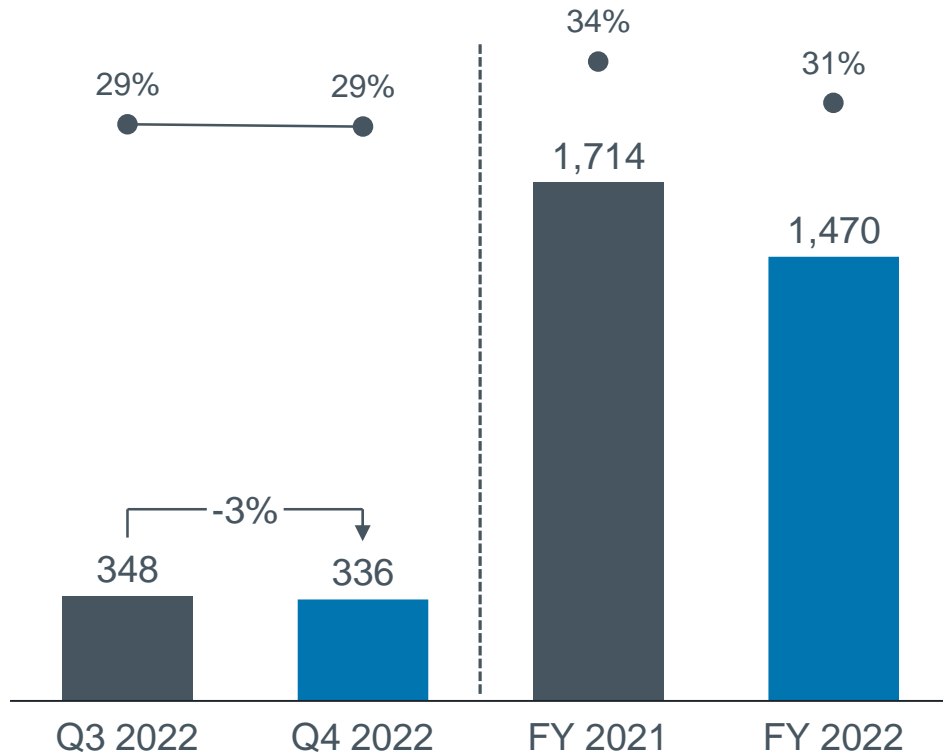
Revenues by region



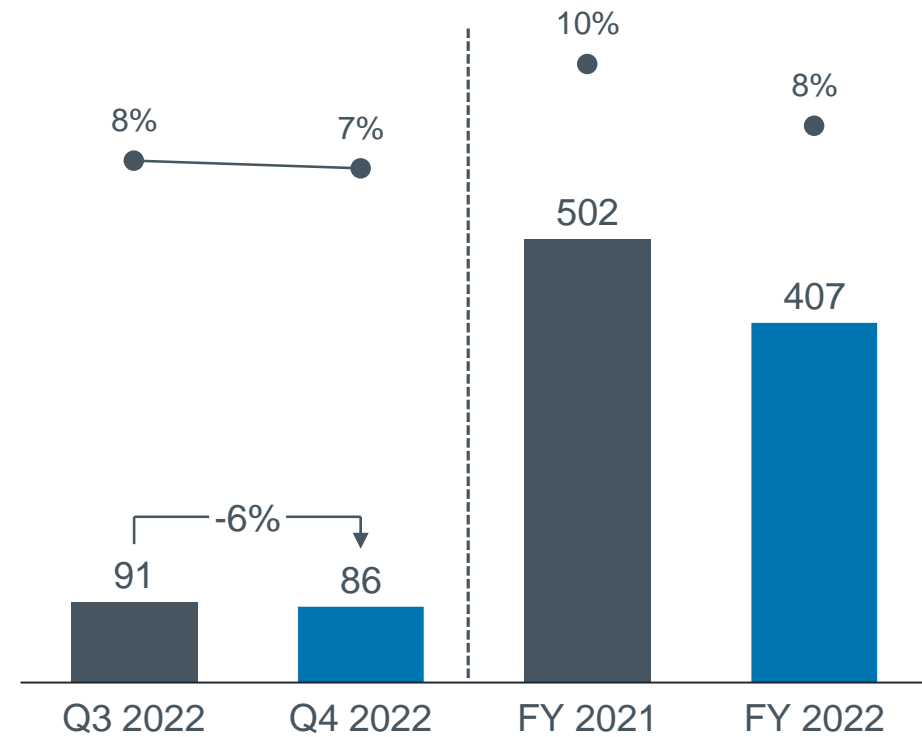
■ EMEA ■ APAC ■ Americas

Group profitability – Q4 2022

Gross profit, gross margin (adj.)¹⁾

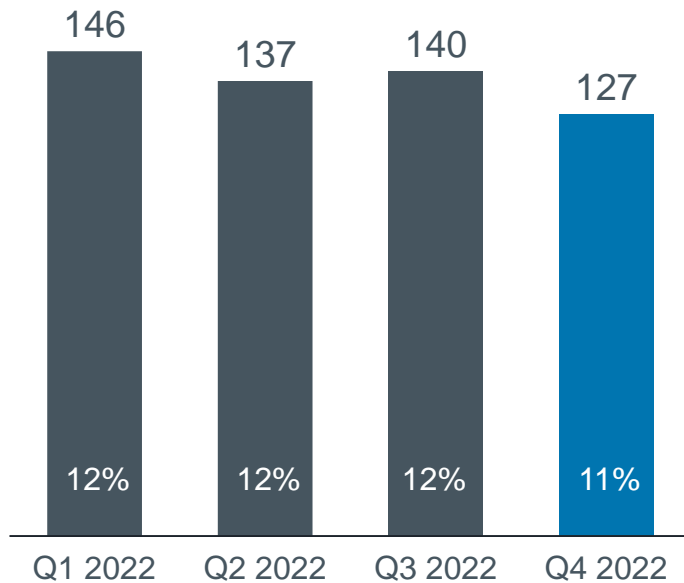


EBIT, EBIT margin (adj.)¹⁾

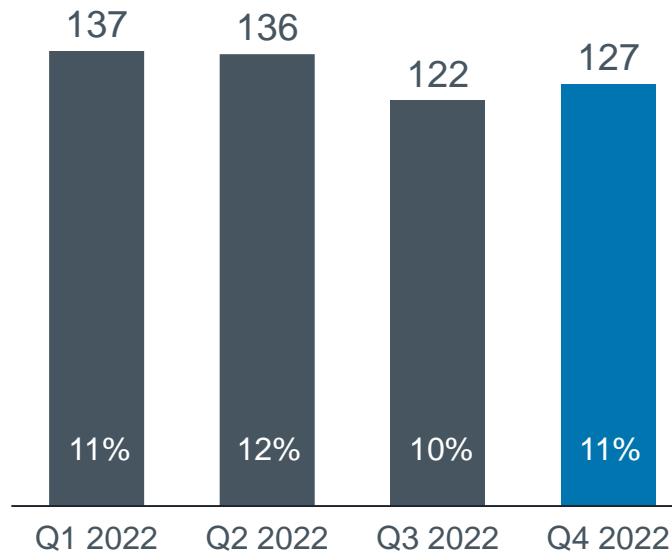


Operating expenses

R&D expenses (adj.)¹⁾



SG&A expenses (adj.)¹⁾

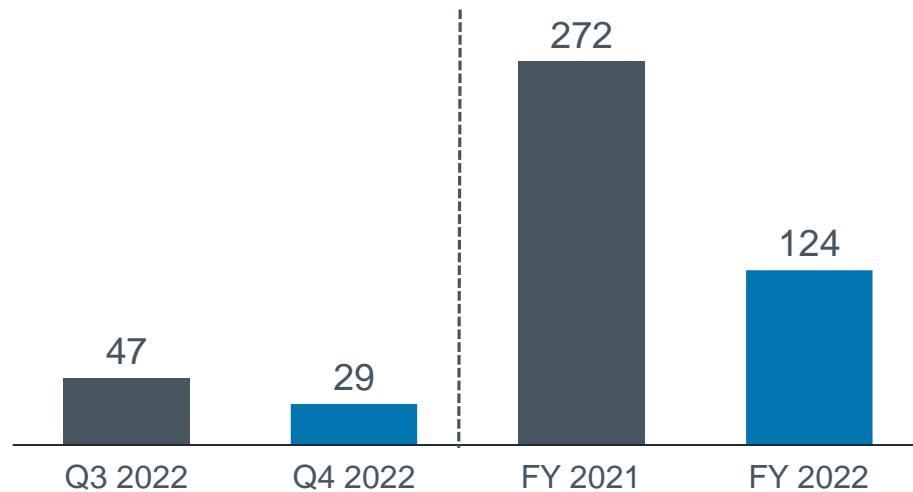


Comments

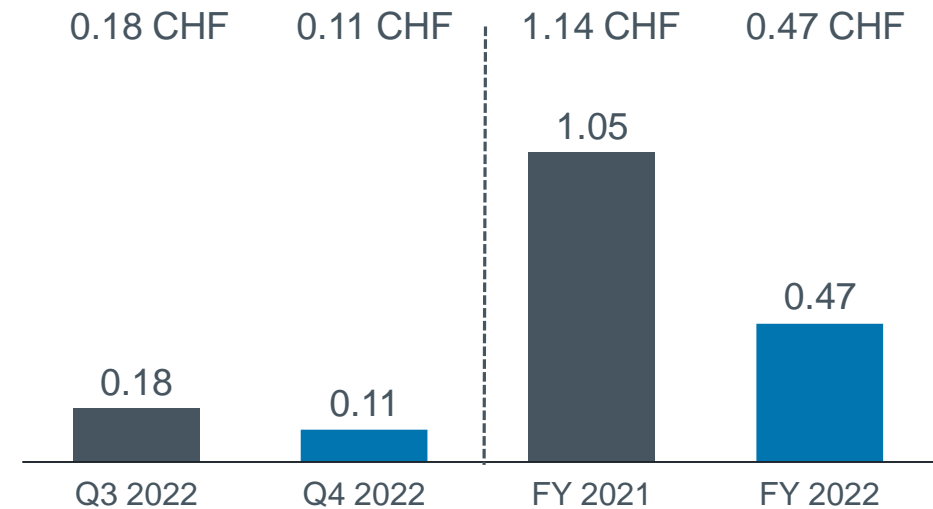
- R&D development reflects streamlining and efficiency programs
- Portfolio- and roadmap-driven R&D investments for new technologies (by far largest portion of R&D in Semiconductors segment)
- SG&A base-line reduction over last quarters, progressing towards target corridor
- Target levels for operating expenses
 - Adj. R&D 11-14% of revenues
 - Adj. SG&A 7-9% of revenues

Adj. Net result and Adj. EPS

Net result (adj.)¹⁾



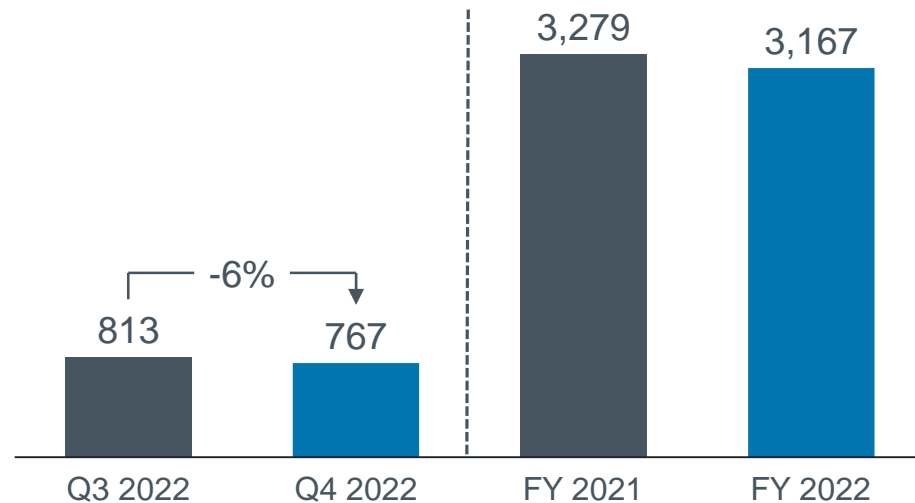
EPS basic (adj.)¹⁾



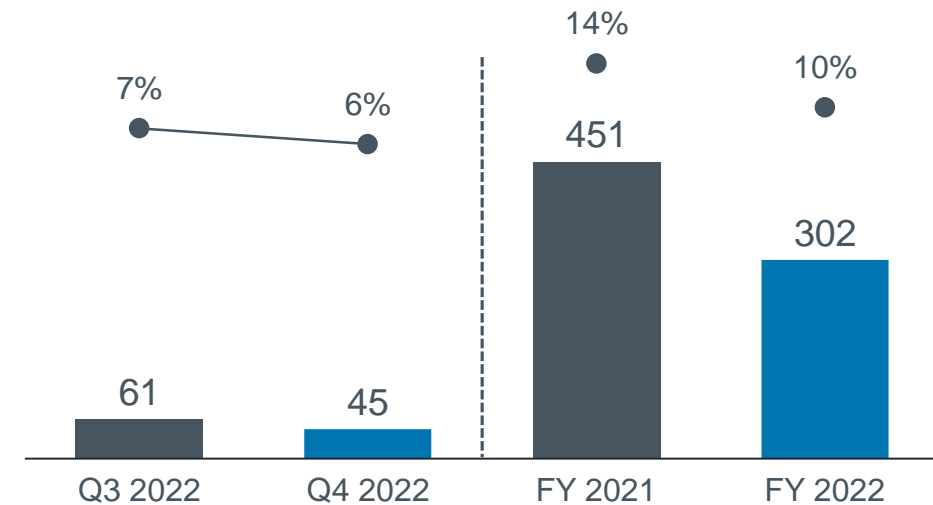
- FY: - Financial result EUR -201m, in line with expectations (FY 2021: EUR -198m), thereof EUR 125m interest paid
- Other operating income EUR 179m mainly due to book gains of disposals, other operating expense EUR -357m particularly due to one-time non-cash impairment charges
- IFRS reported net result EUR -444m

Semiconductors performance

Total revenues



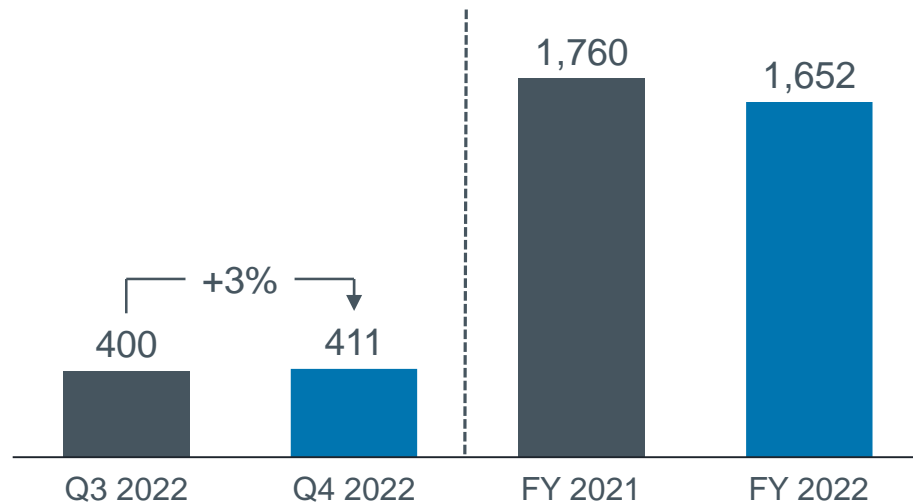
EBIT, EBIT margin (adj.)¹⁾



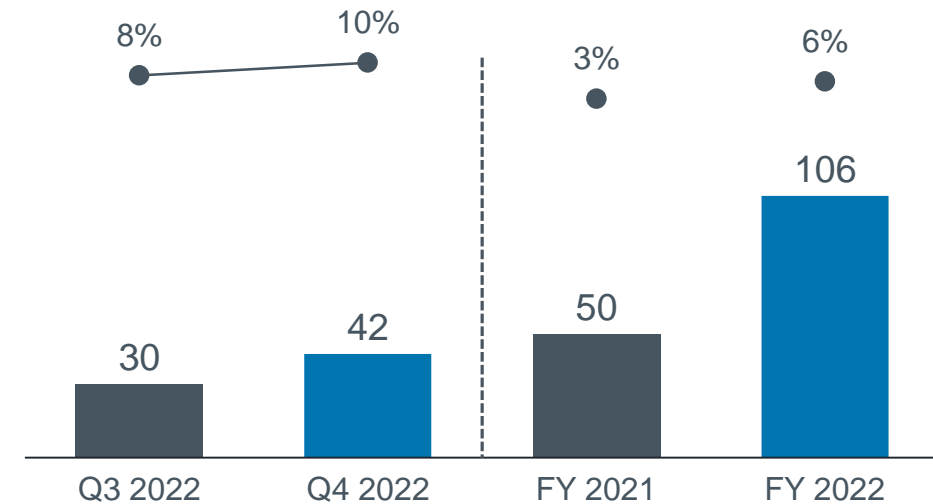
- Q4: Sequential development reflects demanding market environment and ongoing inventory corrections
- FY: - Solid results in automotive business despite supply chain volatility and inventory adjustments
 - Less favorable demand trends in consumer market given lower smartphone volumes year-on-year; industrial and medical overall good performance with negative trends in industrial areas towards year-end
 - Profitability impacted by lower production volumes in H2 as communicated previously

Lamps & Systems performance

Total revenues



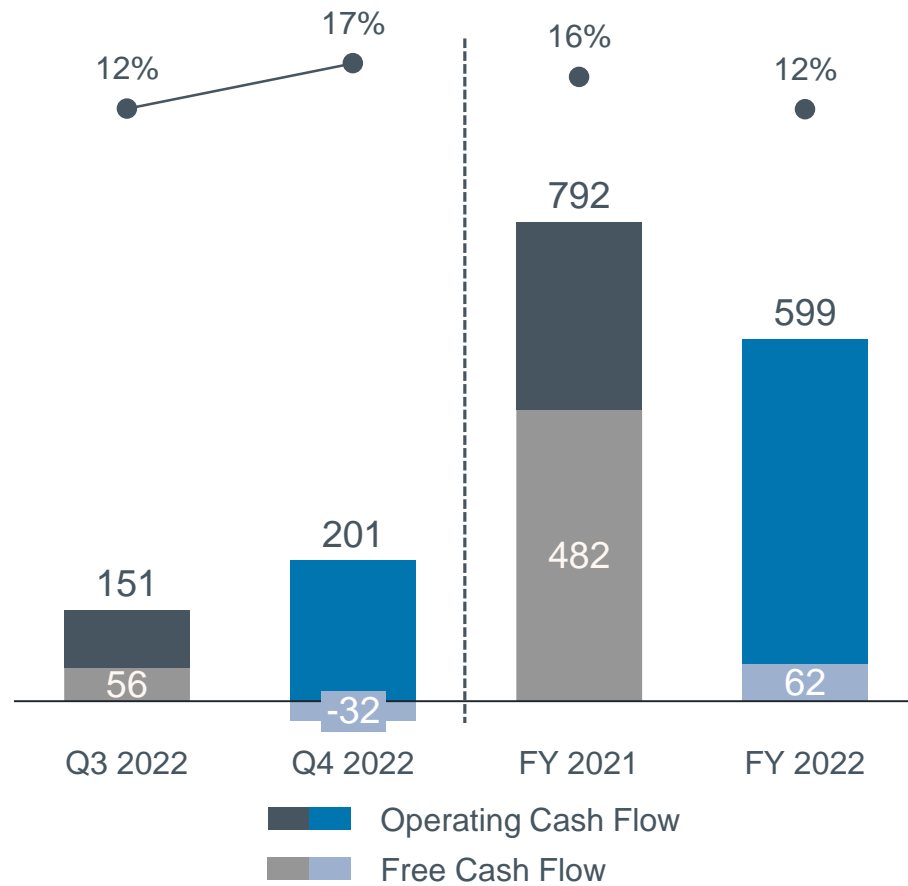
EBIT, EBIT margin (adj.)¹⁾



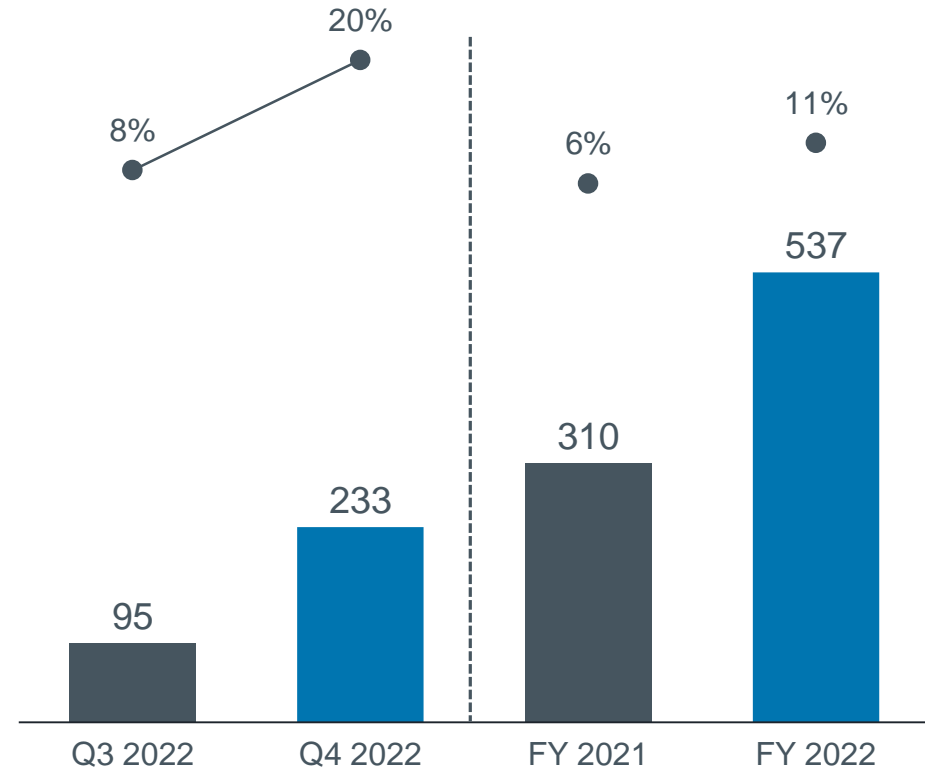
- Q4: Sequential growth driven by strength in traditional automotive lighting (incl. aftermarket), further improved profitability
- FY: Overall good performance of L&S automotive business including aftermarket, despite decreased OEM production volumes YoY, L&S industrial markets mostly supportive
- FY & Q4: Attractive profitability includes positive effects of portfolio streamlining

Cash flow overview

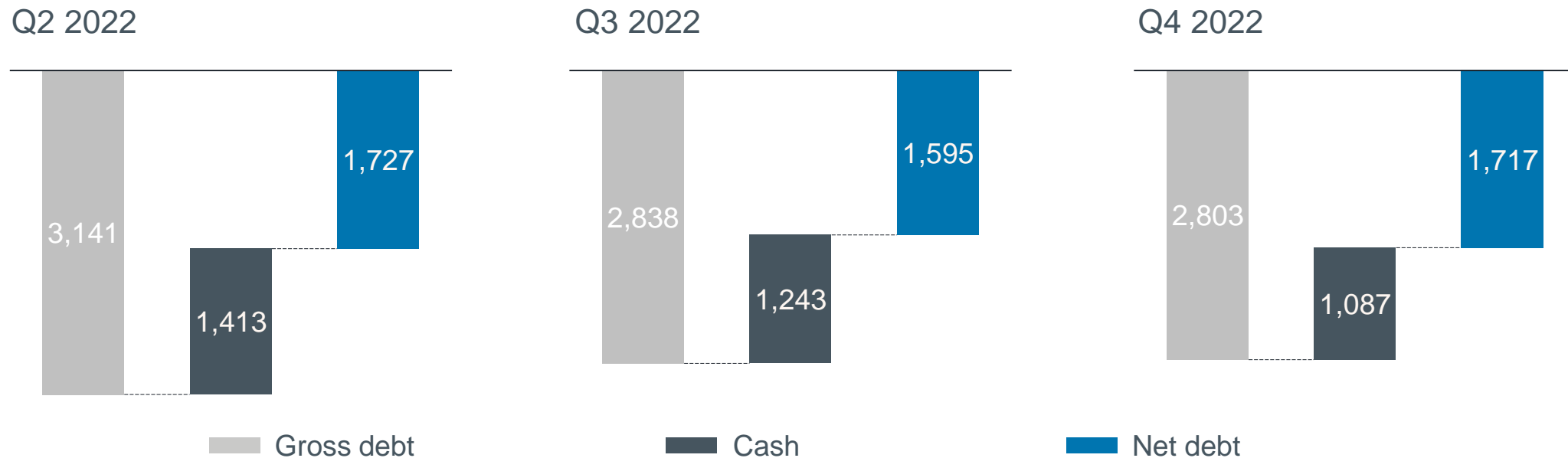
Operating / Free cash flow (FCF)



Capital expenditures



Cash and debt overview



- Substantial repayment of more than EUR 400m in 2022 (repayment of USD convertible bond a.o.)
- Solid group leverage at 2.0x net debt/adjusted¹⁾ EBITDA (end of Q4 2022)
- Well-layered debt and maturity structure, augmented by undrawn multi-year EUR 800m revolving facility
- ~95% of outstanding debt on fixed rate basis
- Adj. EBITDA¹⁾ LTM EUR 853m (based on adj. EBIT + D&A not related to adjustments)

Outlook Q1 2023

Revenues

EUR 900-1,000 million

Operating profitability

4-7% (adjusted EBIT margin)

Comments

- EUR ~10m deconsolidation effects compared to Q4 (Traxon transaction closed early December)
- Q1 year-on-year revenue development reflects deconsolidation effects of approx. EUR 80m

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Profit and loss statement

IFRS reported figures

	Q4 2022	Q4 2021	FY 2022	FY 2021
Revenues	1,177	1,229	4,819	5,038
Gross profit	257	382	1,258	1,449
• Gross margin (IFRS reported)	22%	31%	26%	29%
• Gross margin (adjusted ¹⁾)	29%	33%	31%	34%
Research and development	-146	-163	-630	-692
Selling, general and administrative	-151	-164	-608	-697
Other operating income	1	162	179	212
Other operating expense	-49	-28	-357	-43
Results from investments in associates	-2	-22	-4	-33
Result from operations (EBIT)	-90	167	-161	197
• EBIT margin (IFRS reported)	-8%	14%	-3%	4%
• EBIT margin (adjusted ¹⁾)	7%	10%	8%	10%
Net financial result	-43	-49	-201	-198
Result before tax	-133	118	-361	-1
Income taxes	-14	50	-82	-31
Net result (IFRS reported)	-147	168	-444	-32
Net result (adjusted ¹⁾)	29	119	124	272

Balance sheet

Assets	Dec 31, 2022	Dec 31, 2021	Liabilities and equity	Dec 31, 2022	Dec 31, 2021
Cash and cash equivalents	1,087	1,331	Short-term interest-bearing loans	169	480
Financial investments short-term	21	6	Trade payables	811	710
Trade receivables	533	688	Income tax payables	87	85
Inventories	864	938	Current provisions	256	328
Other receivables and assets	223	185	Other current liabilities	1,345	1,359
Assets held for sale	157	134	Liabilities held for sale	50	40
Total current assets	2,884	3,282	Total current liabilities	2,717	3,001
Property, plant and equipment	1,856	1,606	Interest-bearing loans	2,635	2,646
Intangible assets	3,645	3,989	Employee benefits	179	181
Right-of-use assets	230	260	Deferred tax liabilities	105	205
Investments in associates	35	34	Provisions	45	48
Deferred tax assets	69	182	Other liabilities	318	413
Other non-current assets	54	143			
Financial assets	59	147			
Total non-current assets	5,948	6,362	Total non-current liabilities	3,281	3,493
			Shareholders' equity ams-OSRAM AG	2,826	3,142
			Non-controlling interests	7	8
Total assets	8,832	9,644	Total liabilities and equity	8,832	9,644

Cash flow statement

Selected cash flow items

	Q4 2022	Q4 2021	FY 2022	FY 2021
Net result	-147	168	-444	-32
Amortization, depreciation and impairment	233	173	1,018	760
Cash flows from operations	201	179	599	792
Capital expenditures	-233	-94	-537	-310
Acquisition, net of cash acquired	-18	-73	-25	-524
Proceeds and payments from disposals of businesses	11	162	346	277
Cash flows from investing activities	-236	-8	-183	-560
Proceeds from loans	1	0	32	97
Repayment of loans	-4	-2	-134	-287
Repayment / buyback of convertible bonds	0	-51	-334	-67
Repayment of lease liabilities	-20	-22	-109	-75
Interest paid	-15	-13	-125	-137
Cash flows from financing activities	-38	-168	-726	-534
Net change in cash and cash equivalents (incl. FX effects)	-227	16	-172	-236
Cash and cash equivalents at end of period	1,087	1,331	1,087	1,331

Sensing is life

ami OSRAM